

Educational Supplement

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Break

Dear diary

He made the mighty Castle
He made the lovely Shore,
But when he made Fred Mulley
The thing became a bore.

Poor Fred Mulley comes in for more than his fair share of jibes in the latest volume of Barbara Castle's diaries (1974-76) published this week by Weidenfeld and Nicolson. Mrs. Castle's are mainly in prose. (It was John Silkin, who composed the parody of All Things Bright and Beautiful to write away a wearisome Cabinet discussion of spending cuts.)

The hapless Mr Mulley is usually referred to as "bleating" or "bleating pathetically". "Poor Fred has such a whining voice and is so humourless that he merely succeeds in sounding comical".

During the first year after Wilson succeeded Heath the discussion is all about incomes policies and inflation; in the second, it is public spending cuts and gathering gloom.

Thus a full year's tour of the economic labyrinth at Chequers (August, 1975) produces a share of the kind of inconclusive economic debate you might expect from a bunch of highly articulate politicians.

The Chancellor has a wealth of Treasury figures behind him and a powerful brief. The other members of the Cabinet include one or two like Roy Jenkins, Anthony Crosland and Harold Lever, who are looked to as economic pundits, who contribute to muddy as much water as they clear, leaving the rest free to take up positions dictated by their departmental needs and their particular location on the ideological spectrum within the party. In the end the Treasury always wins. "The priorities emerging for safeguarding were housing (but not housing subsidies), industrial training and investment. The lowest priorities were transport and higher education".

Reg Prentice is portrayed as an unrepentant supporter of a wages policy, preferably statutory, and a loyal follower of Roy Jenkins. "Reg Prentice who is growing overtly more right-wing every day..." Reg Prentice ("in his true colours again") opposing nationalization... There was clearly no love lost between him and his left-wing colleagues at one time, but one thing the Castle diaries do for Prentice is show his consistency and courage (and "insensitivity" as the diarist notes).

Connoisseurs of women in politics will note with interest the refer-

ences to Shirley Williams. As with Mr Prentice, Mrs. Castle has produced a colour narrative, but there is also respect and occasional envy. Who, from the outside, would have guessed Mrs. Castle's personal insecurity, which comes out when she compares her own performance at the Party Conference with Mrs. Williams? "Once again I contrasted myself unfavourably with Shirley who followed on pensions making an effortlessly fluent speech on the basis of a few scribbled notes and who was congratulated by Harold".

Mrs. Castle is continuously concerned about her appearance, going to great lengths to look her best for important occasions like Harold Wilson's farewell dinner. "But, Shirley—late as usual... blew in at last in the same rather crumpled white frock she had been wearing all day, her hair uncombed".

As for Mrs Thatcher, her immaculate appearance is a constant source of wonder (and irritation). "Roy J. sitting next to me, groaned and I said 'She is not quite real, is she?' As he agreed, I added, 'If the world's occasionally come in with a snail on her nose, her hair dishevelled, looking as if she had been wrestling with her soul as I do'. He gave his slow smile. 'I wouldn't say that your hair is ever dishevelled. If it is to be the criteria that Shirley would win every time.' 'That's why everyone likes her', I retorted. 'Mon never feel at ease with a woman politician who looks as if her hair has just been permed'."

Tizard torch

After many months of hesitation, Dr Barbara Tizard has now slipped quietly into the shoes of her late husband, Professor Jack Tizard, as director of the Thomas Coram Research Unit.

It was Jack Tizard who, as a re-

search professor at the London Institute of Education, managed to raise funds to start the unit in 1974. His inspired leadership for studies about both normal and handicapped children, his optimistic belief that action research could lead to policy change, and his ceaseless search for the financial backing to carry it all out on a sufficiently long term basis, all made him a particularly hard act to follow for anyone, and it was understandable that Barbara Tizard should be doubly reluctant to do so after his death at the age of 60 last year. However, advertisements for the post produced a disappointing field. Barbara Tizard, already on the Thomas Coram staff with a London Institute readership, and particularly distinguished for her work on early childhood, agreed to the summer to carry on. Although she has now taken over the job, unofficially, no formal announcement is expected until negotiations on funding are completed with the Department of Health and Social Services—whose original ambition never was that Tizard should provide the building and support staff up to 1984 as well as direct funding of research projects and the Social Science Research Council.

The SSRC decided earlier this year that the Thomas Coram Research Unit should be one of its five designated research centres in the future. (Funding also comes from charities and foundations, and London University puts in money with three tenured posts, including the directorship.)

Once formalities have been completed, planning of research projects over the next six years or so can go ahead, and Dr Tizard's time for personal research will probably be limited, but the Thomas Coram unit as a whole is expected to continue with its usual wide variety of work in handicap, education and child care.

Once source of research funding which seems to have completely dried up is the Department of Education and Science; it is apparently difficult even to get an idea of what they might want in the future. In fact, the flow of resources has now gone into reverse: the DES has taken to ringing up and asking if Thomas Coram would kindly send back various things such as filing cabinets that were bought with DES grant money on different projects.

Listen to the moral

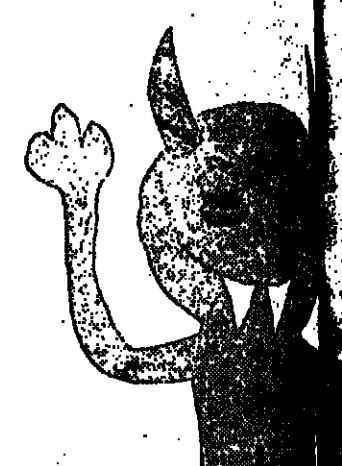
The lighter side of the business mind can take some curious turns. Mr Jim Slater, a person well known in City circles (recent reports are of Canadian oil explorations) has taken once again to children's literature.

The A. Mazing Monster series carry on from where the Mr Men stop, according to Mr Slater. They were developed from an original drawing by Christopher Slater, now aged 15. One day he drew a monster which was so good that it was pinned to the kitchen notice board. Jim Slater began to write a story about it. "You write me a story and I'll illustrate it", said Christopher.

And so it was that a partnership was born which led to 16 small, beautifully illustrated books and a cassette recording, all of them published in England with publication in many parts of the world under negotiation. Slater fears that Mr Slater might have been frittering away his time were this laid to rest. "I suppose you could say I could live off my book earnings", he says, though certainly it would not be in the manner in which he is accustomed.

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The National Union of Teachers' decision to boycott the first meeting of the revised Advisory Committee on the Supply and Education of Teachers (ACSET)—note "education" has replaced "training", an important change of title) can hardly be said to have made an auspicious beginning. The past history of bodies set up to provide advice on these matters has not been happy. Two often discussions have been dominated by the clash of interests of powerful organizations outside the committee. Secretaries of State make ritual pleas for impartial advice based on a cool review of the merits of every argument. They attempt to improve the standard of conversation inside the committee by adding their own "independent" nominees.

In the end, the NUT and NATFHE and the rest of the institutional representatives are under strong pressure from their own organizations to turn the advisory committee into what David Sample, in a recent TES article, called "a sounding board for the views of interest groups". Such a sounding board may be useful; but it will not come up with sober or well-considered consensual advice, nor would it be unreasonable to expect the new body to be any better equipped than its predecessors to be rational or impartial where vested interests are involved. Admittedly, the next phase of teacher training should not be as preoccupied with the slaughter of the innocents as its predecessors, but institutional politics will still dominate many of the issues.

Mr Fred Jarvis's letter setting out the union's reason for giving the committee a wide berth makes it clear that the argument about numerical representation concerns precedent and power within the consultative network as a whole. To the outsider it is not obvious that four NUT representatives would necessarily add more to the committee's collective wisdom than two; this certainly ought not to be the kind of body which often needs to decide things by a show of hands. But



Teacher training in the doldrums—challenge to ACSET

the NUT (and, no doubt, the DES) have their eyes on the revision of the Remuneration of Teachers Act. The union remains determined to keep a clear majority on the teachers' side in Burnham. What happens in ACSET could damage their case for this. But ACSET need the NUT. The sooner the union feel they have made their point and can afford to join the committee, albeit under protest, the better. It would not do the NUT any good if those cynics who are saying that the new committee will get on quite well without them were proved correct.

It is not difficult to identify the policy areas which Dr Clifford Butler and his colleagues will have to tackle. It is less clear that Mr Carlisle will be in a position to act on the kind of advice they ought to tender. In-service training is an obvious case in point. On the supply side, the enrolments in teacher education courses of all kinds will have to be monitored and, as the recent circular letter issued by the DES showed, there must be great anxiety about the feasibility of maintain-

ing high standards in preparation for primary teaching at a time when the chances of young teachers getting jobs must be tenuous.

No doubt these are matters which will continue to concern ACSET. How secure is the future of the BED? How should the balance between BED and PGC courses be maintained? Will the enrolment of candidates be in line with the balance which ACSET is likely to recommend? Most of the answers depend not on research but on judgment: it will be a test of the new ACSET to find out if they are capable of reaching judgments of this kind which can be translated into administrative action.

The major concern should be the search for the best mix of education and professional training to provide the schools with the varied staff they need. Institutions where teachers are trained do not exist for the private satisfaction of teacher trainers; they are part of a market place of higher education, offering students a range of courses from which to choose. These courses, in their

turn, lead to qualifications which have a market value.

If the balance of teacher training is to depend on the private preferences of either the providers or the students, the needs of the education service must be made clear through financial incentives and administrative pressures, so that the interests of the students and the "choice" and the universities and colleges which "offer" are harmonized with the requirements of educational policy. This, of course, raises issues which can far beyond ACSET, but unless these issues are addressed, the members of the Committee could be wasting a lot of time.

Having for so long been preoccupied by numbers, there will be many who welcome the opportunity to pay attention to elusive questions of quality. There are few subjects under the microscope which prompt more hasty judgments and sweeping generalizations than the quality of teacher training. This is proved by "sloppy" and "superficial" and many all the other derogatory phrases which are used to maximize disapproval of the minimum of itemized competence. ACSET is well stocked with professional teacher trainers who can fend off airy generalizations. Are they as ready to make their own constructive criticisms—or is this where vested interests over?

One area in which attention to quality and concern about numbers are together in respect of the teacher training response is the Green Paper, the Inspectorate's Survey and the Framework for the Curriculum. ACSET set in hand a major study staffing in relation to the curriculum which ACSET will want to build on. There is a long way to go before the of a curriculum-led teacher supply education policy is realized, but it is a worthy cause which the newly-reconstituted advisory committee could take up and one which even the NUT could support.

Comment

Down with private schools

Labour's conference resolution demanding the abolition of private fee-paying education belongs to the same radical scenario as Mr Tony Blair's abolition of the House of Lords and his call for basic socialist legislation to be passed within the first seven days of the next Labour Government. It is strong on rhetorical excitement but many will think it a bit soon to take to the life boats. It has to be read in conjunction with a withdrawal from Europe and the European Convention on Human Rights. Of course, it allows great scope for tactical variations—the same considerations which earlier caused Labour policy committees to prefer harsher measures on the grand scale to anything as crude as outright legal prohibition. It is not, by any means, the first time Labour has threatened to have fee-paying education abolished. This resolution is one of the things which annoy those who want to commit a new Government to specific actions now. But the party manifesto, resolutions and the party manifesto is not likely to be held (Mr Callaghan has his way, is likely to remain so) and even what appears in the manifesto does not necessarily get put into effect—as, witness, the repeated attempts to prevent private schools from benefiting from the tax advantages of charities.

This does not mean, however, that all this is just sound and fury signifying nothing. There are grounds for believing that indignation about private schools will perform the same function in the politics of education in the 80s and 90s as indignation about grammar schools did in the 60s and 70s. It is not clear that abolishing the private schools really would improve education in the maintained schools. All the evidence is that social-class differences are as—or more—directly reflected in educational performance within the maintained schools as they are in differences between the private schools and those provided by local authorities. But this is not an argument about abstracts such as "standards" but a political dispute about social power and personal freedom which happens to be located in an educational context. In this sense, the issue of private versus public education has great emotive strength. Both political parties will recognize this. Mr Thatcher will not be altogether averse to her opponents stirring up this particular hornet's nest.

In a free country it is repugnant for the State to forbid private education or so harshly as to make it impossible. Nobody would dispute the libertarian argument against this restriction of personal freedom—a libertarian argument which must rapidly be caught up in religious controversy and other expressions of social and ethnic diversity. If education is as important as the abolitionists claim, then it would be unwise to give the State and its organs a monopoly over it. If it is trivial, then it is a minority exercise of State interference to forbid people to make their own arrangements for schooling.

There is another reason for deploring the elevation of this issue to a top Labour priority. It distracts from all the other important questions—not least questions about money and resources which are the common coin of current concern, but also those about the development of comprehensive secondary education and the secondary curriculum, the structure of examinations which regulate it, and the need to develop a coherent and effective pattern of arrangements for 14 to 19, extending beyond the school and further education to various forms of vocational preparation, training and work experience. It is not that these matters are omitted from Labour's agenda. It is simply that there is a danger that the current obsession with private schools will distort the priorities and dissipate energy needed elsewhere, while at the same time damaging still further the party's libertarian credentials.

Nose cut to spite face

Cumbria's decision to charge its schools for using their own premises at weekends and on some evenings is deplorable. It is a prime example of the kind of parsimony that is an easy option for anyone having to cut a budget quickly. It makes neither economic nor educational sense.

It is of course inevitable that fringe activities will be restricted before a school's main teaching functions are affected by cuts. But the extra cost of heating, lighting, and opening and closing a school at weekends is tiny compared with the huge value of the school buildings and equipment that will remain idle if school clubs and groups cannot find the required high level of the authority may be implying that outside school hours they should make the best use of these buildings by hiring them out to whoever waves the fastest wave of pound notes.

But this would be taking Mr Carlisle's philosophy of only getting what you pay for to an unrepresentative extreme. Teachers are willing to put in many hours of their own time to run an enormous range of activities, many of which may be as vital to a child's education as the mainstream curriculum. Computers were first introduced to many schools through extra-curricular computer clubs, for example.

Government policy for the past ten years at least has been to encourage the greater use of school premises outside school hours. With high youth unemployment, few teachers now find weekend jobs, if therefore makes even more sense to keep these schools active.

When there are hard there is every reason to make better use of buildings, and to capitalize on the willingness of teachers to work at weekends. Cumbria's action should be a warning to other authorities about the dangers of not thinking through the consequences of their policies.

Making the grade

The graded tests approach to foreign language learning assessment seems to have a lot to offer in a subject where a lot has been waiting for more than a decade. The rates of attainment in language learning were virtually every child starts, but less than 10 per

cent get an O level, has justly been taken to Passchendaele.

The stop-step approach of graded tests coupled with more emphasis on oral communication skills and less on written language, is not only improving rates in the form of those opting to continue with French. It offers a worthwhile challenge even to those who give the subject little or no thought, and some recognition of that achievement.

There are some important lessons in grassroots curriculum development and widening acceptance in schools. The most clearly defined criteria for each level of interest shown by exam boards in this shows they are not the rigid enemies of innovation they are sometimes supposed to be. A further conclusion might be that the answer to chronic problems in curriculum is not always to throw money at it. It may be that the boards would be less interested in recommending the same tests, ideas, and their (terminal) exam if the Government had not called for "national criteria" in the new syllabus subject means. In this area, teachers are a few steps ahead.

But it is not only the exam boards who have found themselves falling into the trap of graded tests movement has had. Some teachers from such people as Brian Leach, Leeds University, and Michael Baines, York, but it has been essentially new classroom teachers. The Schools Council only barely stepped in with funds for evaluation.

One of the remarkable things about the success of graded tests is the way it has taken off without grandiose educational projects or formal in-service development projects that when such language tests have been painfully aware of the higher qualities of their old grammar school teachers—and when it is touched in terms of their own needs, then such developments can find their own momentum.

No comment

"Education for Neighbourhood Change" is a low-cost, eye-catching, jargon-free leaflet to help groups, organisations, and individuals to develop their own new initiatives, and keep pace with the changes in the world. It is published by the School of Education, University of Nottingham.

NEWS

Police truancy patrols spark Home Office review of law

by Richard Garner

The Home Office is conducting a review of police powers to deal with truancy. An increasing number of police forces are now mounting truancy patrols but there is doubt over whether the police can step in to return children to school.

A Home Office circular on juvenile crime, notes reservations about the police's legal powers when it comes to truancy. The review may well sanction the patrols but Mr Larry Grant, chairman of the National Council for Civil Liberties, said the NCCL would be asking the Home Office to be asked in the Commons about the issue. With cuts in spending reducing the number of education welfare officers, police involvement in truancy operations is likely to increase, Mr Grant said: "In educational terms this is not desirable. They have got no authority for insisting that children go to school as truancy is not a crime."

Mr Glyn Rowlands, education welfare officer for East Sussex, and

president of the National Association of Chief Education Social Workers, said legal advice showed that if a child was stopped and put in a police car to take him home or back to school, it was the same as detaining a child. Over the past two years of anti-truancy exercises in East Sussex, only children who had committed crimes were picked up.

In Cheshire, some heads are contacting juvenile police departments with the names of truants who are then visited at home by police officers, where the importance of regular school attendance is stressed with them and their parents. Places where truants congregate are visited by the police and sometimes children thought to be truants are taken home or back to school.

Inspector Elizabeth Young, head of the juvenile department, said: "There is a very close relationship between habitual truants and petty crime."

North Wales, eight police officers, each based in a local authority area education office, are responsible for a group of second-

dary schools and their "feeder" primary schools. Officers patrol local areas, return truants to school and visit the homes of absentees and discuss their problems with parents.

Officials of the Home Office said this week that discussions were taking place with the Department of Education and Science and the Department of Health and Social Security about the police role in searching out truants—focusing on the powers the police have in acting along with the aid of education welfare officers.

Some youngsters never attend their local comprehensive school, a book published yesterday said. Mr Roger White, co-director of the Baywater Centre in Bristol, which provides full-time education for disruptive and maladjusted children who have stopped attending local comprehensives, says in his book, *Absent With Cause*: "The attendance of some youngsters at their local comprehensive schools is zero. A row of thoughtless ten spaces in the register each week."

Teachers may have to pay parents' debts

by Diane Spencer

Teachers could be left to foot the bill if parents fail to honour their debts for school meals. The Berkshire director of education, Mr Peter Edwards, has sent letters to headteachers asking them to ensure that parents do not accumulate debts which must be balanced daily in cash registers of secondary school cafeterias and in primary schools where traditional meals are still served.

In the letter, Mr Edwards says he is taking from petty cash in case of hardship or if someone forgets but it was the responsibility of the person who lent the money to see it was repaid.

"I do not expect to be faced with a situation in which I am asked to recover debts not paid by parents," he says.

Mrs Anne Lladlaw, the county catering officer, said she had "passed the buck" to the education department to work out a system to make sure the service did not lose money.

"You cannot run credit through a cash register, I told them," Mr Harry Rose, head of Pedworth primary school and divisional secretary of the National Union of Teachers, said. "Unfortunately, teachers were not businessmen and were treated as such."

Mr John Pense, head of Wymersley primary school, and the county's federation secretary of the National Association of Head Teachers, said: "I don't collect wages, I have a very limited problem. He thought the letter was badly worded."

Mr Pense, chairman of the education committee of the Association of County Councils, Mr Allstair Lawson, claimed there had been an encouraging uptake in the number of children eating meals in secondary schools this term.

Boyson hints at further cuts

A line that higher education will suffer further spending cuts was given this week by Dr Rhodri Iwan, junior education minister. He said in London that government expenditure plans advised for the universities and higher education generally, a period of broadly level funding, with the number of home students remaining more or less constant. But he said: "Even this could not be regarded as sacrosanct. The wisdom of these plans would depend on the state of the economy over the period."

Dr Boyson said an inter-ministry group was investigating the feasibility of reducing the whole higher education system, both the university and non-university sectors, to longer term economic and industrial needs.

Block grants may give more to over-thrifty

by Patricia Rowan

Many local education authorities are likely to find that they do better out of the block grant arrangements, when they are announced next month, than they did under the old rate support grant system of supporting local spending.

The reason for the expected boost to education is that the method chosen for calculating the block grant on an authority-by-authority basis is that favoured by the Department of Education; this means that it will be calculated on what they ought to be spending, rather than what they are already spending in a given year.

According to the DES's own sums, which seem to have been largely accepted in negotiations with Mr Michael Heseltine's Department of the Environment, a number of metropolitan districts have been markedly underspending on education, and will be entitled to more grant. Prominent among these are I.L.A.s in the West Midlands, particularly Dudley and Sandwell, though Birmingham could come in to the same category. Trafford and Tameside in the Manchester area are two more likely starters for a financial boost based on former low education spending.

Many of the counties have also been found to be marginally underspending on education, and they will be entitled to a bit more grant.

The only factor left which might influence the current calculations is the IMF report, due within the next week, on how the country's education is likely to be affected in individual local authorities by the block grant allocations decided on.

If the judgment of district inspectors differs widely from the figures of DES officials, a rethink within the next four or five weeks is possible.

Shortage of specialist help for handicapped leavers

Educationally-subnormal youngsters who are given enough help can do better in the job market than ordinary slow learners. But it warns published this week, says a report published this week. But it warns that the intention of handicapped into normal schools makes the necessary level of specialist help less likely.

The report of the transition from school to adult life for handicapped youngsters in nine UK education authority areas is part of an international study in the 25 countries of the Organization for Economic Development and Cooperation. The British study, *What Sort of Life?*, was written by Ms Patricia Rowan, the deputy editor of *The TES*.

Her report says that specialist careers officers and other staff are achieving impressive results in preparing handicapped in the special schools for work, and in placing them in jobs, with the help of the Manpower Services Commission, a time when jobs are increasingly hard to get. But there are not enough specialist COs, she says,

to provide the same level of help to the handicapped throughout the schools system.

With the extra help, those classified as mildly subnormal are often more successful at work. But it is difficult to find jobs or work experience without long training and support, which is rarely available, and the more clever of the badly disabled, who find it difficult to complete their education.

The report concludes that improved communications could be made to make the services to the handicapped better without extra cost, but that it is constraints on local authority spending as much as any lack of cooperative spirit which prevents the various services from giving fuller scope to those dealing with handicapped youngsters.

See Platform on page four

Union boycott weakens advisory body

by Bert Lodge

Fewer than one third of the members of the newly-constituted Advisory Committee on the Supply and Education of Teachers (ACSET) will be serving teachers after the decision by the National Union of Teachers to boycott the committee.

When it met for the first time on Monday representatives of all teacher associations numbered only eight out of the total of 30. The body, allowed to lapse two years ago by Mrs Shirley Williams, then Education Secretary, was formerly the Advisory Committee for the Supply and Training of Teachers.

Local authority associations, with a total of nine seats, are the biggest group. School teacher associations, not counting the NUT, have four seats. The decision by the NUT to boycott the committee was taken because it feels that the two places allotted to it are insufficient. It wants four.

At Monday's meeting Lady Young, junior education minister, hinted that further cuts in teacher training might be necessary. Echoing a letter from the DES to college principals in July this year, she warned that the likely demand for teachers would be significantly lower than the 420,000 to 460,000 planned.

On the curriculum Lady Young said the Government was coming to the end of consultations on its paper, *Framework for the Curriculum*. We envisage publishing a new document of guidance around the turn of the year.

A paper on the future of the teacher training system is to be considered by sub-committees who will make detailed recommendations which ACSET meets next February.

'MOT' test plan for staff hits trouble

by Bob Doe

The idea that teachers should be regularly retested for schoolworthiness—like the MOT test for cars—was attacked this week by the National Union of Teachers as "shallow thinking".

The plan was put forward by Professor John Honey, head of Leicester Polytechnic's school of education.

Every five or ten years teachers should undergo recertification, he suggested at a meeting of the National Council for Educational Standards. Teachers' salaries and promotion should depend on whether they had updated their qualifications, he argued.

Mr Peter Kennedy, NUT President, said better teacher training in the first place, more in-service education and extra teachers to cover staff away on such courses were the real needs.

Local authorities were already empowered to check on teaching standards in schools and an expensive organization, to "MOT" teachers, was "completely out of touch with reality".

Earlier, the NCES conference heard from Dr Brian Twiss, principal of Westfield College, that HM Inspectorate had "incontestably documented" the fact that "the student of today—whether at school or university—is less knowledgeable and less intellectually competent than his counterpart after the last war".

He spoke of the "abhorrent influence" of the idea that school should be the mechanism for social engineering and of the subversive influences of sex education and projects like the Schools Council Humanities Curriculum Project.

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Oxford University Press

Houghton award effects 'embarrassing' Victory for education officers in comparability battle

by David Lister

Education officers have succeeded in convincing their local authority employers that their pay differentials with teachers and lecturers have been badly eroded since the 1974 Houghton award to teachers.

The National Joint Council, the employers' negotiating body, this week sent a letter to the chief executives of every local authority advising them to take a fresh look at the repercussions of the Houghton award.

This follows nearly two years of considering the anomalies caused by the award by a working party of the employers and the National and Local Government Officers' Association.

Education officers have become increasingly angry that their salaries are often lower than college principals, head teachers and some school heads of department. A recent survey by the Association of Education Officers found that in 40 local education authorities the chief education officer was not the highest paid employee in the service.

One CEO told the TES this week: "It is embarrassing and awkward when a college principal who is earning more than the chief education officer comes to him for advice."

The NJC and NALGO joint advice to local authorities says that the implementation of the Houghton award has caused certain problems in some authorities which have not been resolved by recent comparability studies. It urges authorities to "arrive at suitable solutions"

locally bearing in mind: relative job size or responsibilities; the between education administrators and teachers; market and recruitment factors; career structure within the education service as a whole.

Education officers have long been claiming that the erosion of differentials is causing people to leave the education office for school and college rather than progress the other way.

The employers have already agreed to raise the pay of deputy chief education officers from 70.75 per cent to 75.80 per cent of the chief's pay.

No settlement has yet been reached on the 1980 pay award for education officers. Officers under the rank of deputy who were claiming a 20 per cent increase have been offered 13 per cent and their claim has gone to arbitration. Chiefs and deputies are still negotiating. They claimed a "substantial increase" and have been offered 12 per cent.

The arbitration on the 13 per cent offer to lower rank education officers will also closely concern school secretaries, school meal supervisors, nursery assistants and lab technicians who all come under the same NALGO negotiations, though they are all on lower pay scales than education officers.

An education officer's salary starts at about £5,500, a lab technician at about £3,800, a school meals supervisor at about £3,500 and a school secretary at between £3,000 and £3,500. The vacancy for the chief education officer at Gateshead is being advertised at a salary of £15,471.



Michelle Wood and the winning menu.

Haute cuisine, cold demise

by Stephen Cohen

The irony of the junior cook of the year contest, "Hot Wings", is that it can be in such an event, was that it was sponsored by the makers of electric cookers and held in the Savoy hotel which prides itself on preparing its exotic dishes on gas or solid fuel ranges.

The irony, it seems, is such a thing in the world of culinary arts, was that the similar menu came out on top, and indeed, a vegetarian selection took third place.

The tragedy was left lying around the minute after the judges had done their work, the event, and dads had had their free buffet lunch and the nation's press and broadcast cameras had departed. All 45 of the 15 entrants' carefully-prepared courses were slowly going colder and colder, getting nibbled and nibbled and eventually ending up in the slop pails.

It never seemed to occur to the competitors' families, onlookers and general freeloaders that the children's creations might be more interesting and appetising, for eat, than the Savoy's chicken and rice buffet lunch. My cursory testing, well, heavy sampling, to be honest, revealed that there was a lot of difference. For one thing, the Savoy was not serving up Michelle Wood's delightful baked vegetable with walnut butter and bacon. Nor did they have her place in sautéed cream and the surprise chocolate mousse.

Michelle, 14 years old and from Formby, Liverpool, took first prize of a micro-wave cooker, two weeks in the South of France for these people and a course of lessons in haute cuisine.

Second prize went to Maria Anne Jorvie, 16, of Fairlie, Ayrshire. Joanne Last, 15, from Goudhurst, Kent, was third.

It was a pity that not everyone could have won a prize, but getting through into the finals involved knocking out 7,000 other hopefuls. Abigail Saxon, 15, from Bristol, wiped back a tear as her mum told her there were reporters hanging around. "She scraped up her Gâteaux des noisettes aux fruits and put on a brave smile. Alison Edwards, 16, from Swindon, tipped her bottle of lemonade into her pail while her guard of honour stood all forlorn.

And Sarah Peters, 15, from Stockport, threw caution to the wind and tucked into her profiteroles aux quinquinaux with abandon. They were quite nice.

"Nicer than the Savoy's," said an auntie. "Yes," said her friend. "There are so dry, there's nothing in them. I need something to wash them down."

And then they got on to Princess Margaret who had been showing the winners their prizes. "She needs to watch her figure," said the first aunt. "At one time she was so stiff and stodgy."

"Just like these profiteroles," said aunt two.

Education Secretary, is expected to announce next week that the number of schools in the scheme is to be cut yet again. DfES officials are working on offering 6,000 places to about 250 schools. Originally the scheme was going to cater for 12,000 children.

In spite of government efforts to attract the interest of lower-paid families by offering bigger subsidies, headmasters still feel that it will be those parents on middle-income who will mainly be taking advantage of the scheme.

Frankly, though, if their fears are justified it will make it easier for the schools to foot the bill for subsidizing the pupils and make it increasingly likely that they will be able to ask parents to foot the bill themselves and only pay it if the parents cannot meet the cost.

Parents should say what they would pay

by Sarah Bayliss

Parents with children in schools should be asked what part of the education system they expect to obtain free and what parts they are willing to pay for, says the Child Poverty Group.

A survey in one Bristol comprehensive reveals that the parents of free writing paper and textbooks are a top priority among parents. Eighty per cent and 84 per cent respectively thought that the school should pay for these.

By contrast 54 per cent thought there should be free kit for sports and 40 per cent thought swimming lessons should be free. Parents' priorities should be free writing materials should be free. Only 23 per cent thought there should be free, just 3 per cent thought the school should provide a midday meal.

The idea of a national survey to establish the priorities of parents is put forward in a pamphlet issued by the CPAG this week. The author, Mr David Bull, a lecturer in social administration at Bristol University, said the comprehensive school survey carried out by one of his students, David Bull, suggested that some of the large secondary schools with meals and textbooks—were more than 20 probationers at the beginning of a year.

This September many schools without any newcomers, and smaller schools hit by falling rolls may see no probationers for five or more years.

By the early 1990s more than a third of the present teaching force will have left or retired... and we will be on the verge of another boom period.

Mr Mark Carlisle, the Education Secretary, had put the issue of school uniforms under the spotlight with his "blunt approach" to parents paying for them, said Bull.

The pamphlet describes "attendant" costs arising from children's compulsory school uniforms. It lists items such as school uniforms, sports kit, domestic science materials and textbooks.

Some parents also faced the costs of exam fees, fares for school trips, swimming, music kits, materials, and special clothing for crafts and science.

Parents were also "convinced" to buy school uniforms, books and other goods from school.

What Price "Free" Education? Poverty Action Group, 48, White Street, London WC2B 3NH.

Talks to attempt rescue of axed quango

Representatives from 12 education authorities met in London today to discuss the future of the Centre for Information and Educational Disadvantage (CED), a quango which was axed by the Government at the end of 1989.

They will meet the government at the centre at the offices of the Metropolitan Police, which is to be the CED's new home. Many big cities have rejected the CED, which is now facing a £100,000 deficit.

Walsall has been the most generous with a firm offer of £25,000 including the salary of the centre's director. The centre's annual budget has been £250,000.

Today's meeting will discuss whether enough cash is on offer, and if so, what the centre's work might look like in the future.

Subjects for future projects will be rural education, adult education and language.

Personal column

Ted Wragg

Survival of the species

might be applied to some 30-year-olds.

We must, however, be prepared to face up to the worst possibilities: that many teachers, seeing the lack of promotion opportunities and surrounded by the same faces year after year, will become bitter and demoralised.

The effect on schools would be devastating.

I went to a school staff meeting a couple of years ago to talk about changes in our society and in education. The school was an exciting one. I had innovated a great deal in the early seventies. During discussion several older members of staff spoke with pride about the school's progressive attitude to education, until one of the younger teachers spoke out. "I don't find this school progressive at all," he said. "Every time someone suggests a change people say 'What is wrong with what we do now?' and nothing alters." Once he has fought for and achieved his objectives today's radical can easily become tomorrow's conservative.

Teachers are given front-line responsibility for the survival of the species. When society becomes more complex, more dominated by technology or bureaucracy, more exacting in its demands on members, it is in classrooms that everyone hopes the next generation will be adequately prepared.

I was recently writing about teaching in higher education, where obstinate refusal to face up to the demands of a rapidly changing world is not unknown. It occurred to me that the Great Historian in the Sky is probably at this very moment entering the phrase: "What is wrong with what we do now?"

It's nice to have a few friends round" (Julius Caesar), and "I think they've all gone home" (General Custor).

I do not believe that we should be over-gloomy about the future, even if the prospect initially seems black. The teachers who will be the early and middle years of the 1980s. By the early 1990s over a third of the present teaching force will have left or retired, primary enrolments, on present trends, will have risen about 10 per cent, according to school populations will be on the verge of another boom period.

In the short to medium term, however, there is a serious problem. The reduction of extrinsic rewards, such as promotions, means a shift is needed to intrinsic rewards, like satisfaction in the job. Although that in itself is a good thing, the species is a tall assignment to give to teachers. It is also a tremendously important one which most schools have handled with great skill.

Amidst all the popular press criticism of schools it is often forgotten that in the decade from 1965 to 1975, when society demanded more and more qualifications, the percentage of children obtaining from one to four "O" levels or their equivalent went up from 15 per cent to 25 per cent, and those obtaining two A levels from 10 per cent to 12 per cent.

This puts considerable pressure on the senior people within the school, such as heads and deputies, some of whom will be the same age as or younger than their colleagues.

As one of their main functions will be not only to stimulate professional competence, but also to boost the morale of their colleagues. Their own morale therefore needs to be high, otherwise they will be like a holiday camp reduct with a hangover singing "Good morning campers" through clenched teeth.

Let us make this "National Be Kind To The Head Teacher Week" (rather than "Don't Cross The Boss Week" or "Acerational" or "Bed A Head" (going a bit too far)). Go on, get out of your seat, find the nearest head, and be really kind. Give him or her a bunch of flowers and a big kiss. Say: "We're all in this together, and the staff voted to give you these flowers—10 in favour, six against and 33 abstentions." Or go to the head's room, under that table, we all love you. Look forward to reading the magazine "emert proceedings" next Monday.

Major children's hygiene campaign launched after survey Sharp increase in head lice victims

The number of schoolchildren suffering from head lice has risen sharply, according to a survey published last week.

Figures compiled by London's Hatfield and Haringey Area Health Authority show that out of 50,000 children examined last year, more than 1,600 were found to have head lice.

In Hatfield the number of schoolchildren with lice increased from just 0.26 per cent in 1974 to 1.4 per cent in 1979. In Haringey 3.3 per cent were found to have head lice last year.

The health authority has now launched a major campaign to help parents and children deal with the problem.

Dr Raymond Donaldson, director of studies at the extension centre of the London School of Hygiene and Tropical Medicine, said: "The number of schoolchildren infected seems to be on the increase."

He said the psychological problems of victims were often worse than the physical ones. "Other children and adults take a harsh view of these problems. The person concerned feels a stigma attached to them," he said.

Parents should make sure their children washed and brushed their hair regularly. "There is a lotion available which kills both lice and their eggs after one application," he added.

Trainees warned

The smallest clique in the world must be teachers who were expelled from school, student teachers are reminded in a new advice booklet from the Association of Masters' and Misses' Association.

The point is made to warn students who are about to go on their first teaching practice that while they themselves were likely to have been expelled, well motivated and well balanced when at school, a lot of pupils they will meet are not.

They are also warned that the academic approach which has served them well tends to be rejected totally by the less able pupils.

Learning to teach. AMMA, 29 Gordon Square, London WC1. Free to all student members. Others, 50p.

Classroom guide to copyright

Teachers often use material in a way that clearly infringes copyright, according to a new book on essential law for teachers. It explains the copyright laws and some of the dangers teachers at the same time warning that special licences are required by local authorities to

record independent Broadcasting Authority schools programmes, and that not all L.E.A.s have these licences.

Essential Law For Teachers by Geoffrey Harrison and Duncan Bloy published by Oyez Publishing Ltd., price £7.95.

Use of results study

Reading University is to get £33,722 from a petroleum company over three years for a study of the use made by employers of GCE and CSE examination results.

The fellowship is to be held by Mrs Janet Jones, a local teacher.

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Erratum: Information page 15 TES, 19.8.89

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Department of Education for Northern Ireland

Labour Party conference at Blackpool. Biddy Passmore reports

Kinnock declares war on private system

The Labour Party conference at Blackpool called on the next Labour Government to abolish private schools. And after the unanimous vote, members of the National Executive Committee were confident the policy would be in the next Labour manifesto.

The legislation would make it illegal for independent schools to charge fees; require all I.E.S.s to submit plans for the community use of independent schools; and withdraw all public subsidies to private schools, including charitable status and the assisted places scheme.

"We won't get a proper comprehensive system until the daughters of generals, the sons of leading civil servants and all the children of Labour MPs—including leading ones—attend the local community school," said Mr Graham Lane, secretary general of the Socialist Education Association, proposing the motion.

Schools like Eton and Harrow could be used for residential courses

for trade unionists or as refugee centres for the boat people, Mr Lane said.

Labour's education spokesman Mr Neil Kinnock, replying to the debate said: "As long as the private schools assume superiority, they offer the standard of inferiority to state schools. Don't let us just get rid of the Tories—let us declare war on the system that breeds their attitudes."

A second motion calling for the abolition of corporal punishment, the restoration of education spending to at least its pre-Tory level, comprehensive further education, a free universal nursery service and a return to former school meals arrangements was passed overwhelmingly.

In a fiery speech, Mr Kinnock berated the Government for its spending cuts—but avoided a pledge to restore the money.

"As they weep, they cut," he said. "Crocodile tears and crocodile teeth—it's the same old story." By

1983 the Tories would have cut 17 per cent off the amount Mrs Shirley Williams was spending as education secretary in 1979.

Accusing ministers of a callous disregard for the young unemployed, Mr Kinnock said: "They are not really worried about them—so they want them off the streets. So they should join Jim Prior's 'volunteer conscripts'."

Restoring education spending to pre-Tory levels would not be enough, he argued. Educational maintenance allowances at the supplementary benefit rate must be introduced, at a cost of £500m. One hundred million pounds more should be spent on books and an extra £100m on nursery education.

"I can knock you up an extra £1,000m bill and we still won't have righted all the wrongs," said Mr Kinnock.

But he omitted a commitment to provide the money, making it plain that education would have to "jostle" in the spending queue

with hospitals and other priorities. The Cabinet and the Labour movement would need to be convinced that education was a creator of wealth and essential for emancipating the individual, he said. As such, it must take an early place in the spending queue.

In the past, Mr Kinnock has said he would not be committed to restore all the cuts in education. Earlier in the debate, Mr Christopher Price, MP Lewisham West, had accused the Government of attempting to dismantle the universal system of education built up over the last 100 years and to return to the nineteenth century.

In the coming months, he said, party members must help Labour councils to defy the spending cuts, "even if it means going to the courts".

"I don't think we've seen the end of Tory attacks on the education service," he concluded. "I believe their next step will be to try to go back to school fees."

Leisure is slippery slope of the decade

by Bob Doe

Education for leisure is needed for the next international conference, heard last weekend—but this does not mean extra schools.

Increasing leisure, shorter working hours, saving lives or unemployment, encouraging a complete re-nature of work, and play and an industry new to Britain—the leisure industry—is growing up in void.

A London commercial station—Capital Radio—conference of British and American leisure pundits, end to grapple with "the problem" or what Mr Ken Roberts, managing director of Capital's management called "the slippery slope of the decade".

While it was recognised that a lot of schools do already do leisure education for leisure, the few who thought schools could—do more to help the unemployed.

Mr Ken Roberts of Liverpool, who wanted that schools just use "education for leisure" to justify the sort of English and music teaching they offered.

As for providing leisure alternative to employment, interviewing more than 20-year-olds as part of a survey of the young unemployed, he doubted that any real "ment" problem existed in the minds of those and academics who thought to have the answers.

As far as the young were concerned, the problem was the same as it had always been: a shortage of well-paid work.

For them there was a choice between being bored on the dole and being bored in work. In one way or another, they had got to stay in bed longer.

The present so-called "youth unemployment" of the gaps between boring jobs were longer.

"There is no coming schools can train kids to be unemployed, or to be unemployed," he said. Leisure people was lounging on street corners with the night not the sort of solutions devised by the night planners' ideals do not change the people's. Mr Kim Mollins, of the city's recreation centre, the conference of a new park, escaped with iron and hauled people. It seemed, were go in the park for fear of being lurking behind the trees.

And landscaping of the industrial land did not help. People complained that where to go to show any where their motorbikes at the weekend rather than being self-doubt. With a 50 per cent increase in the leisure studies, the subject, not surprisingly, had a few more positive notes.

Ms Meg Midgeley of the Sports Council, National and Countryside Commission, said money would be spent directly for public recreation centres such as swimming sports centres. As the nation bit deeper, the "costs" of social security would dominate the leisure industry. She advised, those who were in "discovery" of interests of other groups, they should stress the interests of improved leisure for crime prevention, improved physical fitness, consequent savings on public health care.

Failure of co-op teaching boosts case for colleges

by Bert Lodge

The superiority of sixth form colleges in providing an adequate curriculum when rolls were falling was shown by a report out last week, says the Association of Principals in Sixth Form Colleges.

Commenting on the second half of a survey by Dr Eric Briault, former education officer of the Inner London Education Authority, which showed that cooperation between schools was not working, Mr Geoffrey Cooksey, secretary of the association, and principal of Greenhead College, Huddersfield, said it showed the value of concentrating the age group in one place. "Small groups can be supported by larger teaching groups in the age range. In schools it is often the rest of the school which has to share the burden."

Dr Briault found little evidence of success even between pairs of schools trying to arrange a syllabus for their overlap.

The problems involved are considerable, his report says. "Different traditions, and approaches have to be resolved, often without the benefit of a final arbiter." Some heads were concerned that they were not able to monitor standards or to accountable about some of the staff teaching their students do not belong to the school.

The common timetable has to take priority when the school's full timetable is being made and this can cause constraints on the timetable for the main school. "It may be, for example, the only graduate physicist is committed to teach sixth form groups on a Monday and Friday afternoon and this may make fourth and fifth-year options very difficult to timetable."

The time and energy spent by senior staff in trying to make arrangements "might be better spent on other needs of the school. There may also be no need for pastoral care or for careers advice."

"We would hope that students, having to attend several institutions would be seen as a temporary solution, an interim measure leading to either school amalgamations... or to separate 16-plus provision."

Few of the schools were happy with what they were doing for their one-year-in-the-sixth students, the survey found. In some areas students of very limited ability who were unemployed returned to school to improve their basic skills and this number was likely to increase in the 1980s.

"Yet we have seen that craft subjects are among the first to be at risk as sixth forms get smaller and there is little provision in the way of vocational courses."

With the provision at 16 in a comprehensive school needing to range from university preparation to remedial help with basic skills, any size below 150 is not likely to be able to meet these demands, the report suggests.

In the three smallest schools, all with rolls of 500 or under when the study started in 1976, more teachers were on scale three or four than on scales one or two by the time the study ended last year. During that period rolls had fallen by 47 per cent, 22 per cent and 24 per cent.

Four other schools finished up having more teachers on scale four than on scale three. "It seems... the smallest schools with the more rapid fall finish up with a distribution of posts which would be hard to defend on the basis of needs of the schools, defensible though it may be in terms of the safeguarding of the individual teacher."

It was found that falling rolls put pressure on teachers to take an unfavourable subject rather than move to another school. In that case, "it is surely short-sighted for authorities to cut down on in-service education as if it were a frill, or to reduce advisory staff, as if they were an expendable extra, when the danger to the quality of education arising from falling rolls requires rather a strengthening of both these resources."

Falling Rolls in Secondary Schools. By Eric Briault and Frances Smith. NFER Publishing Co, Donville House, 2 Oxford Road East, Windsor, Berkshire. £9.95.



Mrs Thatcher returned to Amersham College of Further Education, Art and Design this week to unveil a plaque marking her opening of the building in 1973. She said: "The work done at college like this is of tremendous value to commerce and industry and this is where the nation earns its living." Mrs Thatcher is pictured with Carolyn Ratford, 18, from Hyde Heath.

Crosbie case reconsidered

The case of Mrs Eileen Crosbie, the teacher who was asked for refusing to supervise a nursery unit she considered educationally unsafe, will be reconsidered next week by Nottinghamshire county councillors.

The county council's seven-strong education sub-committee, which decided by four votes to three in April to sack Mrs Crosbie, will reconvene next Tuesday evening.

Mr Tony Taylor, Nottinghamshire press officer for the National Union

of Teachers, said: "We have been told the sole purpose of the meeting is to reconsider the decision. It will not call any further evidence."

Mrs Crosbie refused to teach at Arnold, near Nottingham, in January after she had lost the aid of a helper. An industrial tribunal had to determine whether she was unfairly dismissed was halted when both sides to the dispute announced they were prepared to talk about her future.

Caning morally indefensible, says psychologists' report

Caning children does more harm than good and is morally indefensible, says the psychologists' professional body, the British Psychological Society.

As revealed in *The TES* last April, the psychologists, after a three-year investigation, have come out as firmly against corporal punishment as the shortage of scientific evidence allows them.

In the report just published the society's president, Professor P. H. Venables, summarises the BPS position.

"After a careful survey and review of the evidence which shows that corporal punishment is of value in classroom management."

"We have found evidence of its disadvantages although inevitably such evidence is not of the highest scientific rigour."

Furthermore we consider its use to be indefensible on ethical grounds.

"The burden of proof that corporal punishment is necessary rests with those who advocate its retention."

The working party that drew up the report says there is no evidence that corporal punishment would be effective than other forms of classroom control. There was some evidence that it spoils the relationship between teachers and pupils and provided an unfortunate model of successful violence.

There was also a danger that physical punishment led to sadomasochistic and sexual perversions in both teacher and pupil.

Teachers at present receive no screening for loss of self control under stress or sexual deviance before entry into the profession and any attempt to introduce an effective screening programme would be met with sound practical and ethical objections.

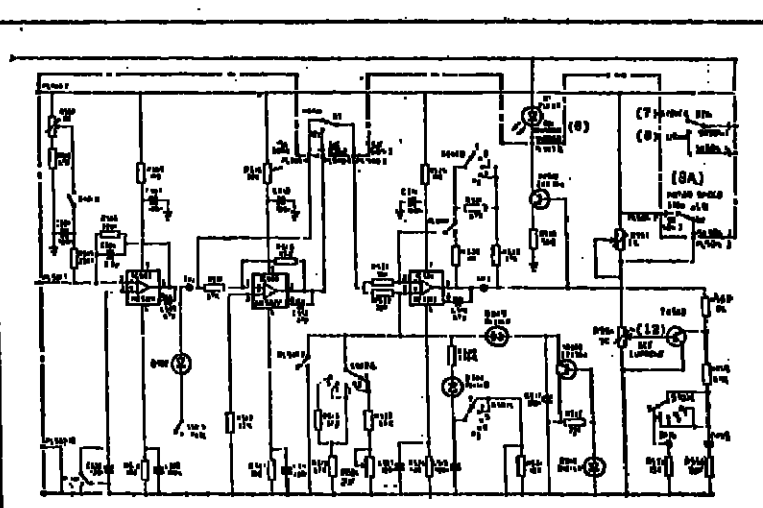
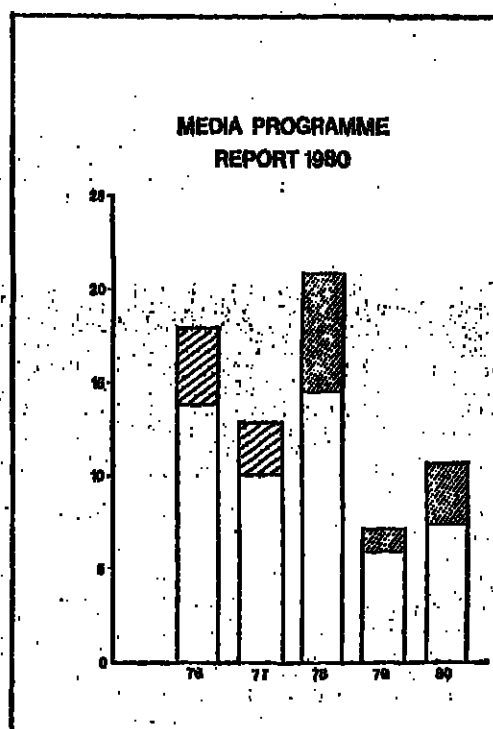
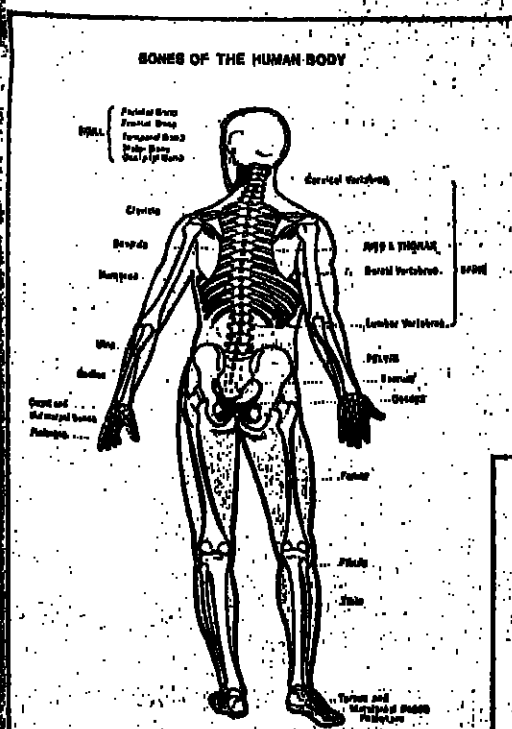
The Socialist Education Association has launched a national campaign to get corporal punishment abolished in schools.

The Labour-controlled Sheffield education authority has agreed that all its schools and has asked teachers, parents, governors and pupils for their views on such a move.

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Minutes of Educational Sub-committee 1980

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School to work

Whatever is happening to industry itself, the business of explaining it to the schools is flourishing. After three years of experimentation and a proliferation

of schemes, the new School to Work organizations are settling down to become an established part of the educational system. Mark Jackson reports.

Industry project has an uphill task

The main report of the School Council's industry project, begun three years ago, is being prepared. It will show that obtaining effective teaching about industry—or any other subject—spread across the whole curriculum is a great deal more difficult than many people thought.

The industry project is the first major study in the council's new style of research, which relies primarily on action research and development of techniques and materials by classroom teachers rather than by a central team of experts. The main work has been done in 25 schools spread across five education authorities, and Mr Martin Lightfoot, the project's director, says that significant change has occurred in between a half and two thirds of the schools.

In each of the five areas the project was run by a coordinator paid initially by the council and by the authority. The schools, says Mr Lightfoot, rejected what seemed the easier options—either setting up an industry subject exam or teaching the subject as part of a generalized course in social education—and took on the task of getting industry awareness into the curriculum generally. It was the responsibility of the deputy head in some of the schools, and in others

arranged by committees of departmental heads.

The apparently small scale of the project and its slowness in producing readily visible results arouse uneasiness among members of the Schools Council and more open criticism from outsiders. Mr Lightfoot says: "It was a question of expectations: people were used to the idea that the main purpose of a school council project was to produce a lot of materials. We thought it was more important to identify how real change can be initiated, and it is a lot more difficult than many people think. One important result is that we have managed to get other people such as trade unionists and employers into the schools to share in the teaching."

The projects findings will suggest that some of the activities which have been set up in the first flush of enthusiasm for improved liaison with industry can be counter-productive.

Mr Lightfoot's term as director finishes at the end of the year, and he is handing over to Sue Holmes, a member of his team. A letter is going out this week from the council to education authorities asking as many as possible to co-operate in the second phase of the

study, which will last until Easter 1982. The council, which has spent £300,000 so far, is putting up another £45,000 more, and the Department of Industry is finding another £30,000.

Seven booklets are to be produced for use in school with simulations, including business games, and a teacher's handbook. They are to be published by Pitman's.

Mr Martin Lightfoot, the council's secretary, says that the project is likely to continue in some form after 1982, as the difficulties over its progress have been resolved. He told the TES this week: "Mr Lightfoot is a very subtle man and was well off to be prepared to make great long term objectives which were not readily understood by everyone. He insisted on keeping a very low publicity profile, even when this caused some impatience. But we have now achieved a satisfactory compromise, and material will be produced which will be of great value to the project."

"What is very important is that, thanks to Mr Lightfoot's total commitment to the idea of research by autonomous local groups of teachers, this is the first major project in which classroom teachers have played the key role instead of being used simply as part of the apparatus of research."

NEWS

Headmasters' Conference, Richard Garner reports

High standards result of advantages says Carlisle

Britain's public school headmasters were reminded last week by Mr Mark Carlisle, Education Secretary, that they "ought" to be able to achieve high academic standards.

Mr Carlisle, speaking just 24 hours after the Headmasters' Conference at Edinburgh had published the result of their 209 schools' A level examinations for the first time, which showed an 84 per cent pass rate compared with 74 per cent overall, said that the independent schools' success was due to enormous advantages.

"You can choose your pupils and to some extent your parents. The better off from this country and from abroad hammer at your door and many parents who are far from well off are ready to make great financial sacrifices to have their children educated by you," he said. "So you can take your pick. Many of you can get backing from industry and other sources."

Treading the via media

Headmasters were back at their schools this week armed with enough ammunition to shoot down even the most persistent of journalists nosing out news of their pupils' misdeeds.

Copies of a new *Good Communications Guide*, produced by the Independent Schools Information Service, price £2, were selling like hot cakes at last week's conference.

It underlines that a harassed head should "play for time" and never give an off-the-cuff comment nor ask a reporter how he or she appears like a heavy drinker. If faced with a visit from a reporter, the guide urges: "Be polite! Most reporters are 'decent human beings' who 'respond to being treated civilly'." In order to promote the school's image, Mr Carlisle said, locally, editors should be asked to contribute to the school magazine or talk to senior pupils. (ii)

invited to be guest speakers on Speech Day; or (iii) limit the board of governors.

On television interviews, Mr Carlisle said: "Do not assume that apparently teenage girls who board who come down to school are somebody very unimportant who may turn out to be a powerful figure. You will be taken to the room or the producer's office and offered some kind of refreshment. Allow yourself only one drink because two or three can appear like a heavy drinker on television."

The guide may well offer tips to the headmaster but could have an added section for his author, Mr Tim Dwyer, director of Information Technology, who is now being asked to write a book on how to handle a head who knows how to handle a head.

The social importance of sport has never been more apparent than it is today. Yet rarely has its need been less understood, and its provision less adequate.

The ingredients of disaster exist in all Britain's cities, including urban stress and deprivation. The recent events in Bristol shows the price of neglect. Fundamental to any understanding of present problems—whether these be football hooliganism, community disturbance or neighbourhood vandalism—is the importance of an appreciation of the importance of good influences in the lives of youngsters.

The family is the bedrock of civilized society, but it is the last consideration in the minds of administrators when providing for education. The truth is that the education of parents in family responsibility is non-existent in most areas.

So many homes the wife has been expected to go out to work, to return and clean the house, to look for the family and to find her only relaxation in putting up her feet, watching the box, and discouraging all conversation. At a time when communication between the generations was never more important, it has never been more lacking. As for providing sport and recreation opportunities for women that is still the biggest area of neglect by both our local authorities and our sports bodies.

Even worse than this are the difficulties of one-parent families. Recently did a rough survey of schools in a ward in my constituency consisting mainly of high rise flats and maisonettes. I was astonished to find that 60 per cent of the children in some of the schools came from one-parent families. This was the result of a housing allocation policy which gave first priority to putting such families in accommodation with the lowest rents.

The schools do a wonderful job at school time, but no representative of authority calls, since rent collectors have been abolished in the name of economy, playing fields are poor, sports equipment nonexistent. So vandalism flourishes, and out of this environment emerges the unemployed youngsters, frustrated and disillusioned, seeking a collective identity, since the means of developing an individual personality are so hard to come by. Sport has more to offer in terms of combating boredom, the root cause of so many of these problems, than almost any other social activity. So, holds out better prospects for producing good community relationships.

Sports Diary

Denis Howell

Home truths for hooligans

Denis Howell

ment Trust, which I had a hand in creating, has been a very considerable success. It is financed, most generously, by the pools companies. Their first task has been ground safety. It is a top priority that they now encourage the fullest use of their facilities for community sport, involving sensible relationships between players and supporters.

It is in the identification of the supporters with the teams that we get most football problems; it must also be the means of their solution. Football must also go all out to attract the family as the basis of its business. On the field every action of dissent and foul play ought to be regarded by the club as their responsibility, and dealt with accordingly. It must be realized that misconduct by the stars often televised to the world, is taken as normal conduct by thousands of youngsters, going right down to schools level. It has to be eliminated.

One aspect of the recent incident when a police sergeant entered the pitch to deal with a case of foul language by a player was intriguing to me. It is two years since the Sports Ministers of the Council of Europe spent considerable time discussing violence in sport. We were told that in some European countries over two or three hundred prosecutions a year take place arising from illegal behaviour on the sports field.

We reported these facts in the summary of our discussions. Not the slightest interest was shown by the press or authority. I personally do not distinguish between an unlawful act on the field of sport or in a public thoroughfare. The football authorities acknowledge the logic of that situation when they authorize private prosecutions for assault on officials and players.

At the grounds the first priority must be to get "all seater", and to provide the comforts which go with such an approach—refreshment, family lounges, decent toilet accommodation. Apart from encouraging the return of family support, all seated stadia will make the identification of offenders easier for the police and club stewards. Nothing is easier for offenders than to lose themselves in the mass of the terraces.

Community sport and recreation is the responsibility of government both central and local. They must be aware of a troubles, and must accept their responsibilities. For the Home Secretary to make speeches attacking the shortcomings of football and slandering his eyes to the festering grounds of bad community relations and inadequate amenities is just as much a dereliction of duty on his part as that which he condemns.

The Football Council Improvement Trust must be helped to finance all that needs to be done by the clubs. The pools pay 40 per cent of their takings in tax. This is far higher than any of their competitors in any field of gambling. It is imperative that it be reduced in return for an undertaking from the pools to increase greatly the income of the Trust.

A national lottery, recommended by the Royal Commission on Gambling, though not at the expense of the small clubs and charities as they intended, must be provided by Parliament. Here again, Members of Parliament who bemoan the evils of hooliganism must realize their own responsibility for much of its cause, if they refuse to provide the means of its removal.

Do we have the imagination and the will to take the challenges of our time in sport and recreation? No one can be confident that these qualities are to be found in the Treasury, the Departments of Education and Environment, or among Ministers. Our only hope is to bring home to them all the fact that by their neglect, they more than share the blame.

Denis Howell, MP, is a former Football Secretary. He was Minister for Sport in the late Labour Government.

relationships than most other investments. Yet the small allocation of resources which was provided when it was the responsible Minister has not even been matched by the present Government, much less extended.

This is where we must begin if we are to make any impression with the local community. The cost will be considerable. Naturally, the Government measures its success in the savings, it can make in the provision of these essential services.

Teachers cannot be employed who could improve the teacher-pupil ratio, no money is available to open up our schools for family sports provision, kick-about areas needed by the thousands cannot be provided, the equipment needed to encourage sports teams is not available. Worse, local councils are expected to raise their prices for playing fields and sports halls, thus making it more difficult for the very people they should be attracting to them.

Ironically, law and order provision suffers no such drastic savings, so the money is available to deal with many offenders, though even in this field the one area of reform which has proved successful—attendance centres, detention centres and community service orders—remain totally inadequate. How absurd that government is prepared to finance punishment and treatment, then the community provision which will prevent so much of its need.

We require an imaginative community sports programme. Every school should be turned into a community school. Primary schools are of particular importance, as they are to be found in every neighbourhood and it is here that good parent/teacher relationships can be fostered. They each have halls which can be used for recreation, playgrounds which can be lit up at night, and changing rooms and showers can be added. Teachers and professional leadership can be provided. At an economic price, every community can have its own sports centre.

Behind the most important initiatives concern our Football League clubs, who provide the only means of identification, the sense of elation and the possibility of success for so many young people. Even if it is a reflected glory, they have taken considerable criticism in recent times, but I know that all of them will respond to leadership and incentives. The Football Ground Improvement

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Firms face £2m cash plea

Companies, busy cutting back on spending as orders drop, face a call to provide more cash for industry education in the schools.

Understanding British Industry, the CBI foundation which teaches teachers about industry, is to launch an appeal for another £2 million. Its new namesake, Understanding Industry, which was set up by a bankers' consortium to send businessmen into the schools, is preparing to step up its fund raising so that it can operate on a bigger scale.

UBI, which started operations three years ago, expects to have spent the £1.5 million it obtained from big company contributors by 1983. Next spring it will launch an appeal for funds to finance its operations up to 1988.

Like the Schools Council's project, UBI has aroused considerable interest, much of it from the school liaison specialists employed by some of the big companies because of its apparent slow progress. The critics attack the small numbers of teachers who have been seconded to industry through the UBI scheme, and say that the organization has concentrated too much of its effort on the wrong areas of the country.

UBI's director, John Nisbet, a former Department of Education official, says that he is aware of the criticisms but is unable to pin down the criticisms to any particular proposals for an alternative programme. "Nobody has been able to tell us what we should be doing," he says.

Mr Lightfoot, Mr Nisbet believes that getting industry teaching into the schools is "incredibly difficult". He says: "Teachers aren't readily influenced by outsiders, thank God. It is one of the great virtues of our educational system that it can't be brainwashed."

UBI is highly interested in what the Schools Council project will have to say about preparing teachers for industry experience. Mr Nisbet says that at present there is practically no evaluation of this kind of activity.

This week UBI appointed the last of its eight regional organizers: Mr Cyril Reece, a former industrial scientist who became a teacher, will be responsible for Wales. The other organizers are based in Glasgow, Birmingham, Cambridge, Amersham, Warrington, Southampton, and Exeter, with the headquarters in Oxford.

Mr Nisbet rejects the criticism that this distribution is in favour of the areas of light industry rather than the traditional industrial centres, and says that UBI had to go where the local authorities were the most willing to cooperate.

In the past year, he says, the organizers have been developing activities well beyond the secondment scheme. They include persuading big companies to set up conferences and short courses for teachers, and joint teacher-industrialist "travels" such as the Wolverhampton working party which is about to report on a whole range of subjects including the relationship of industry learning to the curriculum.

Mr Nisbet agrees that many authorities and individual schools are arranging their own teacher secondments and exchanges between school and industry staff without the help of UBI, and says that the more who do this the better.

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OVERSEAS NEWS

Schooling is a major issue in Sunday's West German federal election

Strauss, Schmidt and die schulen

Comprehensive schools, vocational training and the exploding number of non-German children in inner-city primary schools are the main educational issues worrying West German voters as they prepare to elect a new parliament on Sunday. Although education is to a great extent, the responsibility of the states, it has nevertheless featured large in this federal election campaign.

The bitterest debates revolved around comprehensive schooling. Chancellor Helmut Schmidt's Social Democrats consider the comprehensive school "the most suitable means of ensuring equal opportunities". But the Christian Democrats, led by Herr Franz Josef Strauss, said they would "hide by the classical school system because it is more humane and the more efficient system".

Herr Walter Ruch, West Berlin's Senator for Education and the Free Democrat's national spokesman on education policy, alleged a week before election day that if Strauss won the election, the Christian Democrats would cancel the agreement under which certificates granted by comprehensives are accepted in all states.

The traditional system divides pupils into three different types of school: at 10: high schools which end at age 19 with the *Abitur* the university qualifying examination; intermediate schools which end at age 15 and which offer qualifications for pupils to go on to higher vocational training; and secondary schools which end at 14.

The Free Democrats, headed by Foreign Minister, Herr Hans-Dietrich Genscher, went down the liberal's traditional middle road by saying carefully that the comprehensive school "ought to be given a chance".

About 300,000 pupils, 2.5 per cent of the total, now attend the 300 or so comprehensive schools in West Germany and West Berlin (see below). Most comprehensives are in states governed by the Social Democrats.

In Bavaria, where Strauss's party newspaper has denounced comprehensives as "a crime against pupils", the state has permitted only three of them, closing one after a year's trial.

The Social Democrats argue the age of 10 is too soon for a child's future to be decided and that the system perpetuates class differences and disadvantages.



Hands off our traditional schools... but comprehensives give everyone a better chance. Opponents Strauss and Schmidt prepare to do battle.

During the election campaign, the Social Democrats also added the argument that as the number of school beginners will drop sharply from next year, many communities soon will have to consolidate their schools anyway if they are to remain open.

The Christian Democrats say the secondary schools must be preserved or restored "to provide a thorough general education to prepare pupils for working life and to help them to choose the right trade".

The party rejects the argument that the dwindling numbers of school beginners justifies merging the three types of schools. They claim that comprehensives hold back bright children while failing to prepare the others for working life.

Voters have expressed their worries about vocational training for jobs in the computer age and also about the growing number of foreign children in inner-city schools.

On these issues the lines between the major parties are less clearly drawn. Both are promising to maintain the dual system whereby an apprentice's time is divided between school and the place of training. Neither did any of the parties come to grips during the campaign with the problems raised by foreign children, although all admit this probably will be one of the major issues facing the newly-elected parliament during its four-year term.

In some industrial cities, 50 per cent of the pupils are non-German, the largest national group usually being Turkish.

Some city administrations, worried about the high concentration of immigrant children in certain schools, have taken a leaf from the American book and started bussing children to spread them among all of the community's schools. But where the American schemes bus pupils of all races, the German cities that have inaugurated such programmes so far bus only the non-German pupils, a practice that provoked a protest by Italian parents in Cologne recently.

Another education dispute in election Germany is over whether German schools should shift to a day teaching. In general, the Social Democrats support the all-day teaching in preference to the current system of six half-days a week. They believe it would reduce the load on homework by permitting children to study longer at school under teacher supervision, and most of the comprehensives are run as all-day schools.

Introduction of the full day to other schools has been delayed because of lack of space, although that problem may solve itself as the number of pupils declines. Some proponents of the all-day school system say the best way to can beat the comprehensive lobby is by going over to all-day teaching.

But many Christian Democrats suspect the idea is a leftist Social Democratic ploy to separate pupils from their parents.

OVERSEAS NEWS

Shakespeare and Shaw to be elbowed out in search for 'useful English'?

by Benny Morris

JERUSALEM generation unfamiliar with Shakespeare, Milton, Byron or Keats growing up in Israel and soon to know little about modern English literature as well.

This is the predicted effect of a planned reform of English teaching to go into effect in 1982.

The reform, the second major upheaval in English teaching in five years, will put greater stress on communication and speaking and writing skills. These will become the only English subjects tested in the matriculation examinations.

At the same time, schools will be allowed greater leeway in choosing texts for study and each school will be permitted to select its own material.

The first major shift away from literature to "useful English" took place in 1975, when a new curriculum, based on twentieth century texts, was introduced—to the popular acclaim of thousands of Shakespeare-averse Israeli high school pupils.

Many of the country's older English teachers were appalled, but reluctant to change the ruling.

The old curriculum was set in 1952 and was based on the pre-1948 British Mandate outlook that the purpose of English teaching was, in the words of Mr Raphael Gefen, chief inspector of English, "to impart enough language proficiency to enable pupils to understand and appreciate the culture of the English-speaking people".

While the teaching of English in primary and junior high schools was always geared to imparting basic skills, the high school curriculum was heavily weighted towards the study of literature.

It offered high school pupils a choice of one of three of Shakespeare's plays—*Hamlet*, *Macbeth* or *Julius Caesar*; Milton's *Paradise Lost*; Essays by Francis Bacon; a selection of the works of Wordsworth, Byron, Keats and Shelley; Essays by Boswell, Addison and Steele; and one of two modern short stories.

The result, says Mr Gefen, was that pupils emerged from high school with a lower level of communication skills than when they entered it.

A whole generation of Israelis now in their forties know all about seventeenth and eighteenth century literary figures and works and can talk about them—in Hebrew—but cannot communicate in English even on the simplest level, according to Raphael Gefen.

So the philosophy guiding our 1975 reform was that English should be taught as a means of communication, as a *lingua franca* to be used by Israelis with foreigners in Israel or when abroad.

Since then, high school pupils have been able to choose between

Arthur Miller's *All My Sons*, Bernard Shaw's *Arms and the Man* and Tennessee Williams's *The Glass Menagerie*.

Also set were short stories by Dorothy Parker, James Joyce, D. H. Lawrence and Philip Roth, and essays by James Baldwin, Margaret Mead and James Thurber. Poetry readings included Shakespeare, Auden, Frost, Whitman, Hardy and Housman.

"We stayed clear of sex and violence, and of political or controversial issues," Raphael Gefen said, pointing out that the same curriculum must serve Israeli Jews and Israeli Arabs, religious and non-religious Jews, and Moslems and Christians.

The new proposed reform, is being ardently pressed by Mr David Pat, chairman of the Education Ministry's powerful secondary school education committee, who has decided that today's liberalized matriculation system offering more than 500 different papers has got wildly out of hand.

But some teachers spoken to are critical of the supposed reform. They fear that with teachers and schools given their head, many will inevitably opt for the lowest common denominator and choose the simplest texts on offer, leaving their pupils at a disadvantage with barely a taste of English literature.

The greatest fears in this respect are for vocational schools and schools in underprivileged and border areas and towns.

Judo helps narrow off colonial PE

A. S. Abraham

BOMBAY Many schools should teach children yoga, judo and folk dances as part of physical education.

This is among the suggestions made in a draft curriculum for physical education that the National Educational Research and Training Agency, a federal body, has submitted to the Government.

The curriculum emphasises the teaching of yoga, judo and folk dances because doing so will not cost much money or elaborate facilities in a country where education gets the crumbs of the national cake and where physical education gets the juiciest of those crumbs, expenditure on physical education is considered an extravagance.

This is partly because it has come to be identified as part of Western, and especially British, imperialism on the Indian education system with the introduction of "foreign" sports and games like hockey, cricket, football, track athletics and tennis. All those require large open spaces and, by Indian standards, costly equipment.

The council document points out that in congested urban areas, most schools do not have playing fields. And while village schools may have open spaces, these are in most cases not prepared for use as sports grounds.

It suggests that in villages, open land near a school should, with local consent, be fenced off, and modestly developed as a playground.

In the villages, it suggests, using the local sports and games (ubiquitous in rural India) for lessons in swimming, provided adequate safety measures are provided first.



Crowded classrooms, "foreign" sports

James Connell on the Spanish education jobs no one wants

Chiefs face bombs, threats and pickets

BILBAO The highest risk occupation in the Spanish educational hierarchy is that of provincial delegate of the Educational Ministry.

In the capital of each of Spain's provinces, a government-appointed civil servant heads the provincial administration of the Ministry of Education and is responsible for all educational matters except universities. The post was a virtual sinecure under Franco's regime and a valued stepping stone to political advancement. But now it has been converted into a nightmare with the advent of democracy.

The delegates, under such constant pressures is expected to be an expert in improvisation and short-term solutions, and to offer encouraging promises while working within the limitations of a seriously depleted budget.

Controlled by the highly-centralized Education Ministry in Madrid, his decision-making powers are limited and major issues have to be referred to the central bureaucracy.

His official buildings, which were the delegations have become hotbeds in many cities, protected and the clock by armed police. Delegates have been threatened, harassed, been picketed and at two Bilbao attempts have been shot.

The delegates of the buildings have been defaced by sprayed slogans demanding equality of educational opportunities, free access to universities, and a reduction in the local taxes. The delegates are often called by nicknames such as *chefs*, *chefs de cuisine*, *chefs de service*, *chefs de cuisine*, *chefs de service*, and are full of apprehension about the future of their jobs.

This is especially so in the case of high degree of involvement of teachers in school places for their children.

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bureaucracy transfers teachers to fill gaps at the beginning of each school year with bizarre results such as witnesses by last year's confusion which led to many schools getting off to a late start.

The Mayors of Madrid's satellite towns reckon that there will be a shortage of 18,000 school places by September. Increasingly local councils are intervening in what was previously a central government monopoly, by purchasing building sites and offering them to the Education Ministry or renting commercial buildings as makeshift schoolrooms.

The local-dominated councils have threatened to call general strikes for September if the Ministry does not come up with the required number of school places and to publish a White Paper thrown up by them which purports to show that the shortage of school places is much greater than the Ministry estimates.

Meanwhile the education authorities blindly insist that Madrid's educational needs are covered and that the demands in greater Madrid will be satisfied by September.

But over-increasing demand for local autonomy and, specifically, for control of the school systems could lead eventually to the demise of the education authorities—a fate which some of their would-probably-welcome.

The slow-moving and unwieldy

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features

Can the centres hold?

At one time nursery centres, bringing together nursery school and day nursery provision, seemed an ideal arrangement for parents and their pre-school children. Now the centres are feeling rather beleaguered, as Virginia Makins reports

Combined nursery centres seemed a panacea for dealing with children under five. There we were, in Britain, stuck with a system where day nurseries and nursery schools followed their separate ways, serving different families with different staffs working under different philosophies and traditions.

Nursery schools, of course, took children over three from "normal" families, giving them two or three hours a day of play and stimulation with teachers. Day nurseries had increasingly become an ambulance service for very limited numbers of "priority" families in extreme social and economic difficulties: until 1970 they were run by health departments. That year, they were transferred to social services—but their staffing and traditions have only just started to change. While nursery schools were in the mainstream of education, day nurseries worked in isolation, relatively ignored in the crisis-ridden world of social services.

Eventually someone was bound to come up with a proposal to put the two strands of provision for under-fives under one roof, and deliver a better service for parents and children. People began to talk about "integrated" and "flexible" nursery centres. There were successful models in Europe to go on.

Covenary was the pioneer. Its large, combined nursery centre opened in Hillfields in 1971. Hillfields is still the biggest centre, with 10 places for babies, 20 for toddlers under three, and a large, mainly open-plan space for 70 three to five-year-olds (more children attend, since many are part-time).

Five other authorities followed, opening six or more combined centres around 1974 (usually helped by urban programme money). Nottinghamshire started two, in mining towns. Salford started one, Cameley, a depressed Manchester overspill development, put one in its community centre. They were all very different from each other. The picture was further complicated as voluntary and charitable bodies in London set up a few more centres off the ground, which catered for a wider range of families than those in the "priority" areas.

There were soon go-slow signals from the two Government departments concerned: Education and Health and Social Security. Inspectors from the DES and DHSS visited pioneer centres between 1972 and 1975, and published a rather dampening report.

But in spite of marked lack of enthusiasm at the top, some local authorities went ahead with the idea. Salford opened four more centres last year. The London boroughs of Brent and Haringey have both opened one. There is now a National Association of Nursery Centres, with more than 30 members.

Several official and semi-official reports took up the nursery centre idea with enthusiasm in the late 1970s—the Trades Union Congress, the Association of Metropolitan Authorities, the Equal Opportunities Commission. But in spite of expansion and support, the centres are feeling rather beleaguered.

Nationally, the idea of building expensive new institutions is out of fashion—and theories are developing to back up the general lack of funds. The buzzword is "community provision" which—when it comes to under-fives—usually means



mums and minders doing it themselves with a little help from their professional friends. It is much cheaper and can—in the right circumstances—do a great deal in developing the competence and self-respect of people involved.

With this view prevailing at the top, and with spending cuts, it is unlikely that many more nursery centres will be started. More seriously, there is a danger that what should have been an important experiment, providing experience for day nurseries and schools could build up, will be left out on a limb.

Salford has backed nursery centres more strongly than any other authority. It has five purpose-built nurseries, each taking about 50 children under five, including a couple of babies. Each centre is staffed by a head teacher, with a nursery matron as deputy, one other teacher and 10 nursery nurses. The buildings, like many purpose-built centres, have separate rooms for the nursery nurses' "family groups", and a big open-plan space where all the children can wander.

From the start, Salford boldly decided that all the staff should work on education contracts, with 13 weeks' holiday (nursery nurses were paid the higher social services rate). That removed what was a thorn in the side of many centres—the different holiday entitlements of staff, with teachers' leisurely conditions contrasting sharply with the nursery nurses' and matrons' meagre four weeks. Salford also decided that teachers would work shifts, all year round—in some authorities, teachers stick to school terms even in supposedly combined centres.

Salford's policy was explicit—to cater for the families and children in greatest need. Christine Wilson, head of day care in the social services department, says the nursery centres are "a positive alternative to children coming into care. The children need enriched play experience, stimulation and speech, and nursery officers aren't trained to do it. And we can catch them as babies, at an age when enriched play can make a lot of difference."

The Salford centres take far more two- and three-year-olds than most. The policy is that, when children are ready, they move on into the city's generous provision of full-time nursery schooling. Some of the nurseries have "family centres" attached, where social workers help families with welfare rights, home care and child care.

John Barnes, Salford's chief education officer, says: "We see the centres as preventative. Children with serious behaviour problems at 11 or 12 or 13 have huge sums of money spent on them. We're prepared to pay a little extra at this stage to avoid paying a great deal more later on."

He is scathing about the "Whitely" fashion for community provision. "The way we are taking on in the nursery centres by ad hoc arrangements. They might little love will solve all problems, but they have to say these children and families have serious problems. The difficulties are not readily understood by people who don't live and work in inner city areas."

The Thomas Coram children's centre in London started from a very different line than Salford. The aim was to provide nursery care, education and health services, and a social centre for all families with young children in a small catchment area, defined by how far a mother could reasonably walk a toddler by push or pull. The Thomas Coram Foundation set it up as an experimental model, incorporating an old residential nursery as a garden full of mature trees.

The Coram centre does take social service "priority" cases from outside the catchment area. But the children come from a real mixture of social backgrounds and nationalities, and (unlike most local authority centres) parents have a lot to say about how many hours their children attend. A flourishing local authority

nursery school next door gives parents even more choice.

The Coram centre is a delightful place to visit. The children seem amazingly confident. Staff seem to have lots of time to relax and play with them—they work in teams, with one teacher and three nursery nurses to about 20 children. In some nursery centres, staff seem busy and harassed. At Coram, with its space and garden, life is calmer.

I saw a teacher sitting, chatting and cutting out Batman masks with children, for 20 minutes, while a nursery nurse kicked a football with one toddler for 10. "The level of play at Coram is fantastic," said a head from another centre. "But they have parents coming in at four, longing to see their children. We just don't get that."

Coram is also very expensive. It has health services and a full-time social worker on the premises, not to mention two mother and toddler clubs, a toy library, and a subsidized launderette. Last year, it cost over £177,000 to run (just over half provided by Camden Council, the rest from the foundation).

The local authority centre most like Coram is Woodlands Park in Haringey. It is in a working class, multi-racial, multi-nationality neighbourhood where few parents would qualify for a day nursery place, and there is no other nursery education. Out of 80 full-time equivalent places, only five are reserved for "priority" families. The rest get in first come first served if they live in the catchment area. (Like almost all centres, there is a two-year waiting list: parents put children's names down at birth.)

Woodlands Park is generously staffed, with a head, two deputies (one education, one social services) five other teachers and 15 nursery nurses. It is lavish provision, and Haringey is a bit cagey about costs. But the local politicians and education officers think the provision is justified. They believe that families get a good service, with some flexibility about hours even for part-timers, and that children (many of whom speak no English at home) should get a flying start.

After a few years of experience, a few tentative conclusions about nursery centres emerge. The first is that you cannot integrate two very different (and often jealous) services overnight. For example, many centres started with complicated admissions panels to decide which children should attend. But after a couple of years, the authorities discovered it worked much better if admissions were left to the centres' senior staff, working closely with social services.

The strange system, where parents are charged for day nurseries, but not for nursery schools, looked even stranger when the two kinds of provision were under one roof. "Education" children got in free, "social services" children paid, and parents got bewildered and cross. In many centres, the fees have been deliberately simplified, and all parents pay only for meals.

Much has been made of the difficulty of meshing nursery school and day nursery staff, with their different conditions of service. In the Nottinghamshire and Salford centres, where all the staff have teachers' holidays, things go more smoothly for staff (the problems come in providing continuity for the children). Once holidays are the same, pay differences seem to be less aggravating.

In other centres, the nursery nurses have learnt to live with the unfairness. "It bothers me but it doesn't bother me," as one put it. Arranging to visit or talk about the centres, you can find evidence of hostile relations between education and social services at national and local government level. But once you get to the centre, harmonious working relations seem to prevail.

One thing the centres have done is to point out the poor working conditions in voluntary day nurseries. Most nursery centre staff would agree, *voce*, with the London centre head who said: "13 weeks' holiday for teachers in nursery centres is ridiculous." But all of them say four weeks' holiday for mainly young children working with under-fives—and children from difficult and deprived families at that—is iniquitous.

It is also inefficient. Nursery nurses in the centres where they have short holidays have very high sickness rates. (So do staff in day nurseries.) One nursery centre head said on up days lost through



Above and opposite: Woodlands Park Nursery Centre in Haringey provides a "lavish and flexible service".

Photographs by Michael Abraham

sickness and found that, on average and including holidays, each nursery nurse had exactly 13 weeks off in one year. She reckoned it would be much better for the children if the absences were planned. In Salford and Nottinghamshire, there is much less sickness—and, often when staff are off ill, they count it as holidays.

It's difficult for teachers and nursery nurses to assess how much working alongside each other has changed their practice and ideas. Most teachers I talked to claimed to have learnt a lot about handling younger children from nursery nurses. But most junior nursery nurses said they had learnt much from teachers. "We all do the same things really," they say. "It doesn't make much difference having teachers about."

The senior staff are convinced of the value of teachers. "You see more educational progress than you do in a day nursery. We used to do things—but there is much more structure about it here," said Irene Adashead, the matron of Ordsall nursery centre in Salford. It seems likely that professional interchange is easier in a combined centre than in the popular alternative arrangement, where a teacher is assigned to a day nursery.

Both depend a lot on personalities—but there is more built-in pressure for partnership in the centres. I visited a Cheshire day nursery where a teacher was working. "I have to do a lot of stepping down and deferring," she said. Most of the staff doubted the value of her work. "I suppose she's an extra pair of hands."

Visiting the centres, one suspects that the relatively high status and professional confidence of teachers does rub off on the nursery nurses. The education links usually bring in higher capital and better equipment. One or two centres have laid on in-service training on the premises for all their staff. (There is very little in-service for nursery nurses in schools and day nurseries.)

The staff, bridging education and social services, learn to deal confidently with both agencies. You hear them on the telephone dealing with social workers or persuading a reluctant local infant school head to let children visit before they go to school.

"We're able to get a tremendous amount of help from education and social services," said one head. "Day nurseries and schools can get it too—but they have to know where to go and push. We have staff brought to us."

To visit the centres seems more high-powered and exciting places than most day nurseries and schools. The key question is how much difference this makes for parents and children. They are more complex institutions, with considerable management problems. They have had

difficulties recruiting staff with the wide range of qualifications needed to make a success of integration. And they have undoubtedly taken time to hammer out a working style.

The clearest advantage is that (outside Salford) they have partly broken down the ghetto of the day nursery population of "priority" families. "I don't think we could cope if all the children had deprived backgrounds," Yvonne Brennan, head of Woodlands Park, said. "Julia McKee, head of the Kippax centre in Nottinghamshire, said: 'We'd be swamped without the part-timers. We need normal happy children with good capable parents. We often introduce parents in difficulties to a good mum down the road.'"

The large, open-plan spaces of some centres can seem daunting. But on my seven visits, I only once saw children who seemed subdued and rather miserable, with staff apparently not noticing. It's hard to believe that in general, the mixture of teachers and nursery nurses, with their different styles and the friendly rivalry often generated between them, does not provide a good variety of adult stimulus and comfort for children.

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Parents are notoriously confused about the differences between different kinds of nursery provision—whether it's playgroups or nursery schools and classes, or a day nursery. What bothers them is the hours available, and the general lack of places for under-threes. The nursery centres help on both—part-timers can often pay for a meal, there are more places for two-year-olds, and a few for babies and toddlers.

All the centres occasionally take in part-time children for a full day, to cover a temporary family need or crisis. If the school "bit" shuts in the holidays, the centre is still open if a family suddenly needs short-term day care. "Families have very different needs at different times," said one head. "We can tide them over sudden crises." All the heads are convinced that this flexibility has prevented several children from going into care.

Some nursery centre veterans say that the staff's deep-down attitudes to working parents are often unhelpful. Many nursery nurses and teachers believe, from

their own backgrounds, and even from their training, that "normal" mums stay home with young children. I went to a local meeting where nursery centres were being discussed by nursery and infant teachers from two authorities who were just starting them. There was a lot of hostility to the idea, and talk about "feckless" parents, content to dump their children on the state.

These attitudes can also affect the work of day nurseries, and even schools, but the nursery centres seem in a particularly good position to try to tackle them. They have to get staff working as a team, and this means a lot of open discussion about practice. At least three heads I talked to consciously work on attitudes to parents.

"We always discuss parents' needs, not just what's good for children. It's easy without thinking to undermine parents' responsibilities," said Yvonne Brennan. "We're trying to cast off views about crusading to make them better parents," said Jenny Williams, of London's Colville centre.

From the point of view of parents who are in a crisis, or distressed, nursery centres have the enormous advantage of being there, with a familiar staff, 10 hours a day, 50 weeks of the year. The "community services", social workers and health visitors are, by definition, out and about, and out of contact most of the day. Institutional day care may be unfashionable—but institutions have advantages of consistency and permanency for their clients on the ground.

Early next year, a combined nursery centre will come under a spotlight. After long delays, the National Children's Bureau is publishing research (sponsored by the DES and DHSS) which looked at four centres, and compared them with day nurseries and nursery schools with similar populations.

The research was done in 1975-77, starting when three of the four centres had been open only a year. All of them were still hammering out solutions to the problems of reconciling day care and education traditions, practices and conditions of service.

Inevitably, the research will highlight problems, and ways in which the practice of the centres was less than ideal. But—as the researchers are the first to say—it should not be taken as the last word on nursery centres. The centres involved were just too new.

No-one connected with the centres would now see them as a panacea. There are plenty of other going alternatives—day nurseries with teachers; schools with extended hours and services; children's and family centres run partly by volunteers with minimal professional help. But the centres still seem one of the best, and most logical, ways of meeting the needs of many parents and their children.

features

features

Beyond play

Jerome Bruner and three members of the Thomas Coram Research Unit—Bobb Burchell, Pat Petrie and Barbara Tizard—have been watching video films of children in a nursery class and nursery centre. Here we publish extracts from their subsequent conversation

Tizard: Today, the most pressing problem in nursery education is to ensure that enough of it is provided. But in the midst of our campaigns against cuts, and for expansion, we do need to consider a quite separate issue, which is what actually goes on in nursery schools and classes. Jerry, what was your impression of the nursery as depicted in these films?

Bruner: Watching these films, I was struck by the fact that there was an enormous amount of shifting activity—it was on the town, it was responding to this and to that—and not sticking to anything very much. This was obviously both exciting to the children and quite plainly at times repelling to them, so that they turned off, which I take to be an indication of revulsion.

Petrie: One result of this shifting activity is that the children often can't carry through their play ideas because of interference. We saw one little girl trying to build a tower of blocks and another child came up and started building on top of it. Now if the teacher had been able to make some space for her, and perhaps limit the number of children who shared her space to just a few, that might not have happened.

Bruner: Space, and privacy, I would say, I, for one, would dearly like to see some very careful reconsideration of the architecture—the ecology—of the spaces in which children play. Your studies, Barbara, and the ones at Oxford have all indicated the extent to which space is an extraordinarily important thing. When there's only one space, and a constant circulation of children, it's very difficult to get continuity of play. The "bout" length of play is constantly cut down by distractions coming from the outside.

Petrie: I think it's not only space, but it's rights and their limits—who has the right to use things. If all 40 children in a nursery have equal right to the equipment—then if one child sits down to play the piano and others think it's a good idea too (as we saw on the video) that child hasn't any right to continue to use the piano on her own, and so her play, in its original form at least, comes to an end.

Burchell: Are we suggesting, perhaps, that nursery teachers should be thinking about setting up smaller, more restricted situations, so that if a child is to have an opportunity to develop her play, the other 39 children are not allowed to interfere with it? Yet the general philosophy of nursery education in this country is that children do have freedom to use whatever is set out in the environment.

Bruner: It might be that there's some sense in that—it means that they have to learn how to negotiate their quarrels over property and so forth.

Petrie: But they could do that in a smaller group.

Burchell: I'm not sure, anyway, how much they do learn to get on with each other and share in the nursery class. They learn how to cope. But I do not think they learn how to work out a way of sharing, and of relating to children who want to join in with them. The dominant child gets whatever he's after

—the meeker one retreats and hopes to have a go later.

Tizard: This seems particularly likely to happen in a large open-plan class. The children do not have to learn social skills—they can just drift off when the going gets rough. And it is correspondingly more difficult for them to get to know other children really well. Yet the play and social interactions of children who know each other well is much more advanced and imaginative than when they are mere acquaintances.

Ideally, I suspect we should be thinking of smaller groups of children, with separate rooms for different kinds of activity, but this would also imply increased staffing.

Bruner: I, for one, do not want to be critical of nursery teachers. My intention is to think through what is the nature of their plight—what kind of behaviour does the space and the number force on them. Under the circumstances the teachers are heroic, the number of conversations that some of them maintain is mind-boggling.

Tizard: We have talked so far mostly about the logistics of numbers and space. But perhaps we ought now to discuss the constraints of the current nursery school ideology. There is still a generally accepted belief that the teacher's main task is to provide a rich variety of play materials which will enable the child to learn through self-chosen play. But this puts tremendous constraints on the way in which the teacher can help the children.

If you remember, Susan Isaacs stated the aims of nursery education as "providing for the development of the child's bodily and social skills and means of expression, and opening the facts of the external world to him in such a way that he can seize and understand them". Now Isaacs, certainly did not see this as happening only through the medium of play, and only within the nursery walls, to take the children into the "external world" and bring the world into the nursery. We also need to help children acquire skills which will not develop in free play—e.g. musical skills, and physical skills like swimming. Young children are capable of much more than is often supposed, and as they master a skill their confidence visibly increases.

Bruner: There are several ways, though, of going outside the nursery walls. One of them is fantasy, or rather drama, which is structured fantasy. In China they do rather complicated plays in the nursery, which are fairly well scripted in their outlines, and then they improvise. That is one way of going outside. The other thing they do is to try to relate children to society by giving them proper work—packing torches, for instance. But I want to get back to the business of giving them some skills.

Kids like skills enormously, and I think we avoid developing them, we are scared to death of schools getting too competitive. Whether it is just throwing—or you name it—they need to know what it is like by your own effort to improve a skill by working at it over a period of time. Heresy!

Petrie: Isn't there a problem with the staff-ratio in teaching skills?

Tizard: Yes, but we could make much more use of small groups, rather than working with individuals.

Burchell: What usually happens in the nursery in craft-type activity is that the

teacher works with one child at a time. Because there are so many children to get round, their expectations of what the children can make tend to be low. We saw on the video the teacher showing one child how to fold paper, but at home he was using a ruler and cutting zig-zags.

Also, the teacher tends to demonstrate one step at a time, but not the whole process. The activity becomes a series of individual tasks, separated for the children by queuing up to find out what to do next. But if the teachers worked with small groups of children they could show the group the finished product, and then show them how to do it, very much as they do in Playschool on the television. Provided the children had the basic skills to start with—e.g. the ability to cut Sellotape, use scissors, this method would enable children to produce work of a much higher standard. But nursery teachers don't seem to like working in that way. So it's not very easy for the children to get a sense of using a series of different skills to achieve an end they have clearly in mind.

Bruner: This down-playing of skills has to do with the idea that play should come spontaneously from the inside. But if that is your implicit doctrine, the idea of mastering skill is very difficult to encompass. Because one of the things about skill is that it represents a half-way house between your intentions and the nature of the materials on which you're working. The materials themselves make demands that have to be met by acquiring a skill. The other thing about the notion of spontaneity is that everything has to get done now. On the assumption that if it isn't done now—the child somehow isn't going to be able to get back to it. Not so! Learning happens over time.

Petrie: And it would be naive to think that the "free play" nursery environment doesn't place enormous constraints on the children as well—the constraints imposed by the other children and their activities and by the amount and type of equipment set out. They are just a different set of constraints to the constraints of being taught a skill.

Tizard: Besides developing skills, could the nursery do more to help children to make sense of their world and of what happens to them? Of course, children want to play, and need to play, but they're also very interested in growth and development, in their own bodies, in animals and plants. They're interested in many aspects of the adult world, for example, cars, and motor bikes and space rockets.

Frightening things happen to them, like going to the dentist, or to the hospital, and they need to be helped to understand them in a way which they can

grasp. And because they don't learn easily from talk alone, this means watching their experiences with leisurely care in small groups to dentists, garages, as well as using fantasy play and books. Burchell: I agree that nurseries should concern themselves more with the adult world. When an adult goes into a nursery it's often difficult to find a chair to sit on—they only have little chairs and tables. But in most homes children have a lot of coping with adult furnishings—standing on to reach the sink, for instance. We send children into a peculiar outer world where everything is at a child's level and very strange things are done—like sticking bits of tissue on paper, which admittedly, children enjoy. What areas of life are missing, everything to do with work and chores, washing, shopping, growing their own food in the nursery garden, cleaning cars, from motor-bikes.

Tizard: It's true that children do do kinds of things at home, but they can't be done much better from school, because the staff could be more leisurely. If the teacher took a small group of children to the shops, for instance, they might persuade the shopkeeper to let them see the goods stacked at the back and see them arriving on the lorry. Shopping, as such, could be laid out more extensively than perhaps parents can manage.

Bruner: Another reason I'd like that because I'd like the shopkeeper to be that he's contributing to the education of the very young. I have the feeling that there's a deep mistake in making it appear as if the care of the very young should be confined to a specialist profession.

A compassionate society is one that cares about its very young, its very sick—I don't mean to put them in one category—but looks after them because they can't quite look after themselves. And the more people feel that they are participating in this, the more ideas have been generated and embodied in attractive publications, why should these be confined to the country of origin? If, for instance, the Joint Association of Classical Teachers' new course, *Reading Greek* is really, as Sir Kenneth Dover says, a straighter and shorter path than others into Greek literature, there is good reason why foreign publishers should want to consider it. And, in fact, two are doing so now.

Another fruit of JACT's industry and inventiveness is the Cambridge Latin Course, which has opened up new paths for classics teaching in this country. Already it has been published by Malmberg in Holland and it is under consideration by publishers in Switzerland and Italy.

Barbara Tizard, director of the Thomas Coram Research Unit, would be pleased to receive comments from teachers on these topics, and accounts of their own handling of these issues.



review

The annual Frankfurt Book Fair opens next week. In this issue we print a number of articles to mark the event: ■ on the crisis in British educational publishing, Page 20; ■ on recent developments in France, Page 21; ■ on problems of curricular 'harmonisation', Page 22; ■ on relative levels of public spending on schoolbooks, Page 23; ■ on piracy, and on the German publishing jungle, Page 24

Books across boundaries

Transplanting schoolbooks from one educational system to another is a delicate matter. Kenneth Pinnock looks at some of the more successful attempts to attain this tantalizing goal.

Frankfurt is about cooperation. Every October hordes of publishers scurry from all over the world to the "Green Version", *Biology: An Environmental Approach* (John Murray 1972); for though it has been welcomed and used by many teachers, it is too much at variance with current O level syllabuses to have a chance of really massive sales.

Adaptation, rather than mere translation, is an almost inescapable condition of success in transplanting a course textbook from one educational system to another. "Straight" translation may be all that is needed for many textbooks at university level (and for this and other reasons, the international traffic in university textbooks is vastly greater and more highly organized than that in schoolbooks).

But schoolbooks need to be tailored to local needs. Such adaptation is usually called for when the countries concerned, to draw, to talk to teachers and collaborating authors, and to visit schools on the spot.

The example I know best is Mackenzie's *New Tropical Version of Introduction to Biology*, which, together with the West African edition and the original UK version, now sells over 200,000 copies a year. But there are others. Nuffield science has influenced many countries, but it has probably done so more through less than through translations of its pupils' texts.

On the other hand, thanks to the missionary zeal of Scottish science inspectors, many thousands of Nigerian and Malaysian secondary pupils study integrated science from books which are obviously offshoots of Heinemann's *Science for the 70s*.

Swapping schoolbooks within the English-speaking world is something that was almost bound to happen. What about the immensely more complex question of publishers in various parts of the world buying and selling schoolbook translation rights from foreign firms?

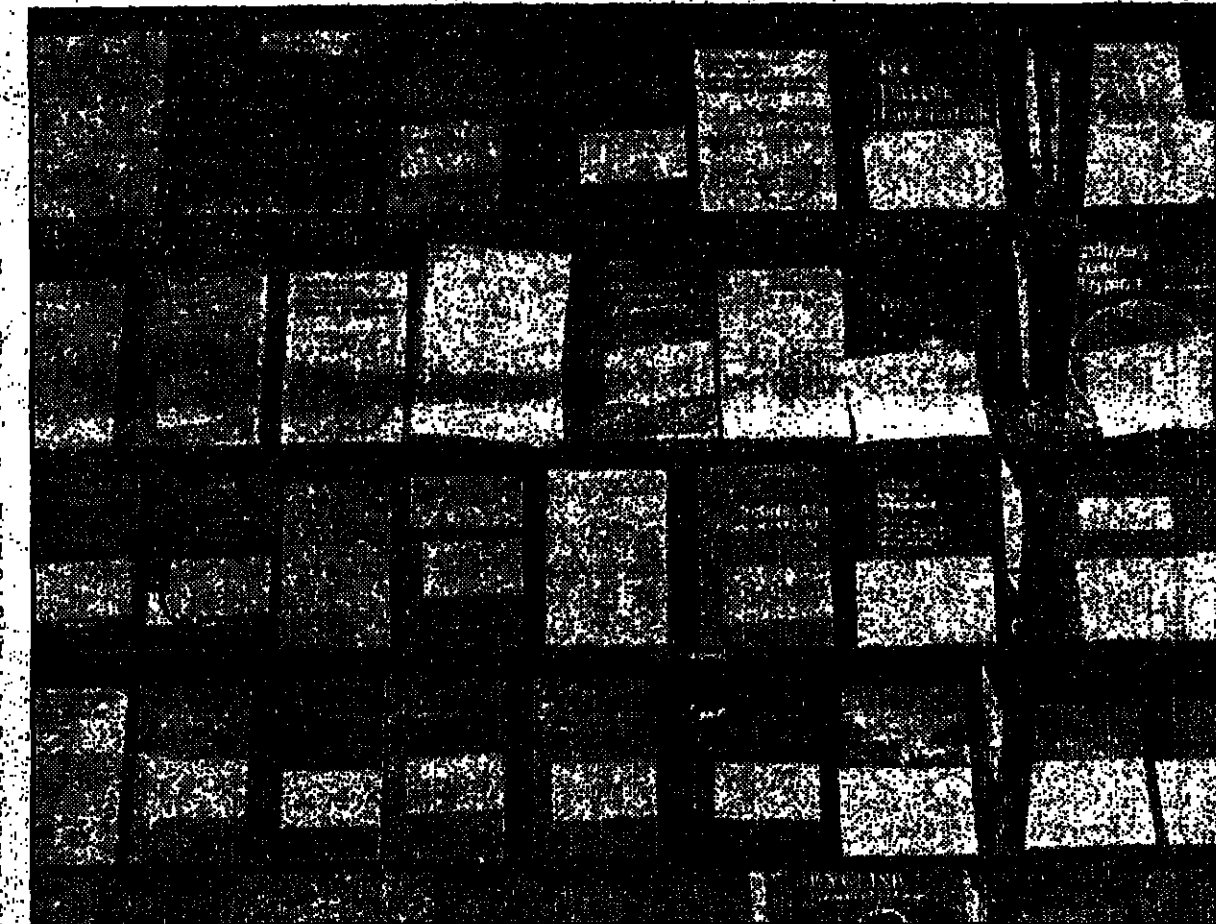
Here, I think, the Scandinavians, and especially the Swedes, set us an example. They believe they can sell their schoolbooks to the world, and to a remarkable extent they seem actually to do so. When they produce material for "minority" languages, sales of foreign rights are indispensable.

A case in point is Almqvist and Wiksell's Spanish series, *Eso es*, published in Sweden in 1974, and since then by Longman and five other European firms. Its lively layout still has an up-to-the-minute freshness. Skolforlaget's stand at Frankfurt or Didaktika being a bold sign in English, "Publishers of educational textbooks and materials". Here, and on the stand of other major Swedish publishers, such as Esselte, Natur och Kultur or Liber, you find well-produced, expert catalogues, entirely in English, of their newer schoolbooks, and a readiness to produce synopses and sample translations in the same lingua franca. The subject area in which the Swedes appear to be most successful is, since linguistic competence is a condition of their economic survival, their very high



standards of design and illustration, in addition to the sound pedagogical basis, has won acceptance for their language coursebooks in many European countries, including Britain. In addition to all their other virtues, the Swedes seem to display great skill in infusing their language learning materials with documentary material of a convincing kind.

Apart from full-scale courses, ancillary books in the modern languages field are obviously attractive items for international deals. The Swedes (and nowadays most other publishers follow their example) design their "readers" so that non-Swedish publishers can print them with a minimum of change. Information books and dictionaries are another "happy hunting ground" for publishers intent on selling translation or publication rights. A typical "property" for Frankfurt, Didaktika or Bologna is the new series of books on biological subjects published jointly by the British Museum (Natural History) and Cambridge University Press. These started life as complements to exhibitions put on by the museum, but the outstanding quality of the illustrations is attracting many foreign publishers to them.



Standard texts? Yes, and every one is a pirate edition. Report on page 24.

If languages, information and reference books (including dictionaries) come near the scale of internationally "tradeable" schoolbooks, then science and mathematics come perhaps midway, with the relatively "culture-bound" humanities subjects at the bottom. But generalizations of this kind are of little value. What counts is the quality of a particular title. Numbers of British secondary science books get good reviews in European science teachers' journals, and a few of the best are translated and adapted. Some European publishers make strenuous efforts to sell English translation rights of their primary and secondary mathematics courses, but as far as I know they have made very little headway against the established United Kingdom-originated books. On the other hand, the first five books of the most widely used British secondary mathematics course, SM1, have been translated and published in Italy by Zanichelli. It will be interesting and instructive to see how SMP fares in its foreign setting.

If Frankfurt is about cooperation, it is also about communication. And this is evident not only in the endless talk that goes on from stand to stand in the Fair itself, but most visibly at the Klett coffee party. By courtesy of Ernst Klett, one of the major German school publishers for the past 20 years or so, one afternoon at Frankfurt has been given up to a meeting of educational publishers from Europe and beyond. The numbers participating have grown steadily from the original dozen or two. In the early days, the ideas mooted were on the theme of cooperation—such as the notion of setting up a central "bank" of illustrative materials. Nowadays, under the lucky multilingual chairmanship of Michael Klett, the meeting takes many forms—maybe a demonstration of the educational possibilities of some new projection device, or films and discussion of distribution systems. But finding ways of cooperating is

still the underlying theme; there is plenty of individual talk, and the participants publish their newest books. The Italian editions of Tom Duncan's *Exploring Physics*, published in Florence by Le Mounier, derived from an encounter at one of these parties; and no doubt many other trading partnerships have begun over Klett's coffee cups.

It is to Copenhagen, however, that I must look for the most perfect example that I know of international cooperation in publishing schoolbooks. There Birger Schuitl, head of Grafisk Forlag, created a chain of 13 firms, ranging from Britain to Japan, to publish the *Easy Reader* series of texts for modern language learners. By gentle persuasion and deft organization, he induced the partners to feed their own expertise into the selection and editing of the titles. And from time to time he organized international conferences—perhaps house parties would be a better term—to review progress, discuss methods, and plan for the future. His own salesmen and editors—those who had personal dealings with him—were to sell them the idea of the series, were of course on top. And naturally enough, with publishers from a dozen countries brought together for a day or two in comfortable isolation, talk was not confined to the *Easy Readers* but went far into the night on every aspect of schoolbook publishing.

International consortia of educational publishers must be few in number and none, I think, has ever surpassed the unanimity and effectiveness of the *Easy Reader* group. In my mind it stands as a symbol of the fact that though nations have and always will have widely divergent needs for schoolbooks, there are moments when schoolbook publishers from different countries can find common ground.

Kenneth Pinnock is Educational Director of John Murray (Publishers) Ltd. and immediate past Chairman of the Educational Publishers Council.

books

Unhappily playing safe

Educational publishers in Britain are facing a crisis.

Liz Heron reports

Charting the progress of developments in educational publishing over the past decade turns out to be a dispiriting exercise, and it augurs badly for the future. The promising experimentation with which the 1970s opened has by now given way to caution and conservatism while, as elsewhere, "Back to Basics" is the watchword currently on the lips of publishers.

The relative boom that began in the late 1960s was cut short around 1973 when rapid inflation brought soaring production costs, and public spending cuts began to gnaw at capitulation (the passing of Penguin Education marked the end of that era). But though it seemed at the time that crisis was merely a temporary aberration, the time has come when the industry is being asked to make a choice between the future of educational publishing is to be taken seriously.

Ever higher inflation, the severity of government spending cuts, falling rolls and other factors have combined to alter patterns of sales and to narrow choice in the kinds of books being published and likely to be published in the next few years. Recent policy decisions have hinged on strategies for commercial survival, though less so for the public sector. A better position to undertake long term investment, to brave higher interest rates, and to stake out bigger claims in the overseas market (which prospers, despite fluctuations and the strengthening of the pound).

As book prices go up, each year less money is available for every round of cuts in educational spending. Local authorities are more hard pressed to conjure up budgets that won't affect the children's welfare, and overall standards of education. Successive governments, on the one hand, have encouraged pressure groups and provided them with small amounts, but have still left local authorities with the choice of whether to comply with central government guidelines—one area can only be protected at the expense of another. In reality all have suffered, and capitulation has been no exception, despite the national books and materials allowance of 2.4 per cent in the Rite Supply Grant for 1980-81 as compared with 1979-80.

Figure for spending on books is hard to come by, but the Education Committee's survey of 1979-80 shows that the average per pupil expenditure on books was 15p in 1979-80 as compared with 1979-80.

port of a National Book League working party, published last year, calculates that real levels of spending have declined and are now well below recommended standards for adequate provision.

Figures recently released by the Educational Publishers' Council and based on returns from 28 of its member companies (they number around 100 in all) for unit sales in the first quarter of this year show that nearly one million fewer books were bought than in the same period last year.

During this time the school population dropped by 166,000. As a reflection of what is happening in the public spending arena even these figures are not representative, since they also include sales to the non-maintained sector, where, although no figures are available, sales appear to be doing well, and are showing an improvement on last year according to the EPC's general view of the situation.

As part of its campaign to bring public and parliamentary attention to the decline in local authority spending on books the EPC is issuing a series of regional reports that detail the breakdown of spending on books and equipment by each authority.

The first two of these, on the West Midlands and the North-West, have already been published, and show striking variations between the two regions. In the West Midlands, though in all but a few cases capitulation has been out or has remained stationary over the past five years, Manchester came top in the league table as the only authority to show a substantial real increase in both primary and secondary between 1975 and 1979, while Northamptonshire was at the bottom, with a real decrease of 58 per cent in secondary and 39 per cent in primary.

The overseas market, despite being comparatively unpredictable and becoming increasingly competitive, has afforded a degree of protection against the onset of lean times at home, with the United Kingdom overseas balance shifting dramatically. Figures from the Publishers' Association for school text book sales in the period 1972-79 reveal a home sales decline of six per cent, but an increase in overseas sales of more than 25 per cent. Among the top 10 educational publishers the overseas market now represents around half of total

Publishers have of course found ways of adapting to certain aspects of the shifting situation. Once a cause for concern, the activities of Area Resource Centres and Aynon's Resources for Learning Development Unit turned out to be a blessing in disguise, as co-publishing became the norm. ILEA's APPL project is being published jointly by John Murray—an exemplary case of how such ventures carry advantages for both parties, with the initial substantial investment by ILEA followed through with commercial marketing and distribution.

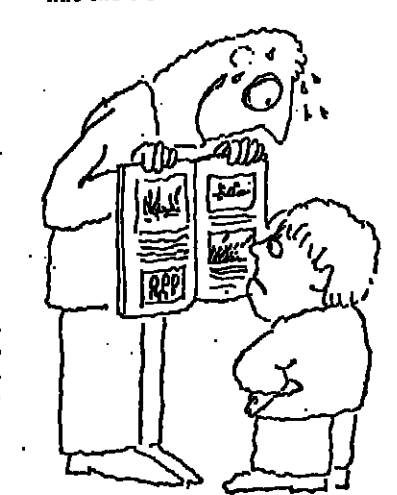
One immediate response to the decline in the market has been a general offensive in the area of promotion and marketing, stepping up expenditure and creating more work for more reps. On other fronts economies are being made: publishers' worst hit have cut their staffs; most are maintaining a policy of non-replacement for staff who leave.

To keep rising production costs at bay—they have almost trebled since 1974—Macmillan, Nelson and a number of other companies began printing in the Far East for the United Kingdom market some three years ago. Gradually others are making the same move, attracted by low labour costs that can mean a saving of up to 50 per cent on United Kingdom rates. The advantages of printing in the United States have also become apparent to a number of general publishers; some costs are lower than in the United Kingdom and the savings are maximised by the much bigger print runs that the size of the American market can justify. These benefits apply equally to United Kingdom academic books, given what are often substantial American sales. However, for school text books the situation is different and there is no discernible trend in that direction, though at least one United Kingdom publisher, Edward Arnold, is currently experimenting with some United States printing to assess its cost-effectiveness.

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Less secure are companies like E. J. Arnold, already badly hit, particularly in relation to their distribution section: since Christmas there have been 190 redundancies. They distribute some 30,000 titles, mainly in the North and in Scotland, which makes up about 20 per cent of the total market. Sales in their publishing division last year were 15 per

cent below budget; the year before was even worse. Worst affected have been primary reading materials, now they plan to invest more in secondary and to aim for a higher slice of the overseas market. Arnold and Stimpson, until recent leader in primary reading, have taken a sizeable drop in sales. Almost everyone is down on last year's levels.



What many publishers see as their greatest dilemma is the choice that has to be made between publishing, with its attendant costs, and relying on the book trade. The latter course of action can be a perilous one, bearing in mind that this year's new books make up the bulk of the future, and that the book trade does not always have to minimize risk. New books have to be all the more carefully presented and expensively promoted, so the capital investment comes even higher. Ginn publishes 300 schemes in the fact that in various stages cannot be in a pressed form rather than with the publisher. But the chief means of transmitting the publishers' economic survival is now paramount, it is important to ask what the regular initiatives. Their job is to make the most of the range may be large: *Le Monde* Education analyses show that the limits for initiative are fine. Publishers are active agents in education, and they can either expand what is available.

Playing safe is a game some no: happy about. Kenneth Pluckrose of John Murray is concerned that a lot of good specialist books won't get published. He sees a trend towards a conservative backlash, and it is all admitted that conservatism "in the air" with severe financial constraints, coupled with the end of the Great Debate and the "solid" and "traditional" are the key words reverberating through the publishing world. There is a decided move away from creativity and back to traditional methods and structures in primary publishing; at secondary level, a heavy concentration on subjects, a virtual halt in new anthologies (hardly anyone is looking these days), and a tendency to identification of areas ripe for development—like remedial and maths, science and geography. C.S.E. and non-exam popularities and reference books. Nelson are embarking on a programme of expansion and Macmillan can record a current upturn in secondary sales, after a bad start at the beginning of the year, with a drop of about five per cent.

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Fausses gratuités

Anne Corbett on some manoeuvres in France

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One, fortunately, are the days when textbook conflict between state and church schools: the public view versus the confession. But ideological battles per- today they are against the situation of outdated social books, like the ubiquitous *Le Monde* primary readers, chained to the publishing sink. And a few voices are heard for more worker control and structures in primary publishing; at secondary level, a heavy concentration on subjects, a virtual halt in new anthologies (hardly anyone is looking these days), and a tendency to identification of areas ripe for development—like remedial and maths, science and geography. C.S.E. and non-exam popularities and reference books. Nelson are embarking on a programme of expansion and Macmillan can record a current upturn in secondary sales, after a bad start at the beginning of the year, with a drop of about five per cent.

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Visit the OUP Stand 901, Hall 6 and the CVK and COUP Stand E705, Hall 6 at the Frankfurt Bookfair.



Gentlemen's agreements

Mary Pluckrose

Agreements! A Book of Agreements by Charles Clark. 1980. Pp. 128. £8.50. 04 655 016 1.

It is a most frequently asked question, and as yet unanswered, why it is that the contractual agreements which govern the publishing industry are so often so unenforced. The answer, I think, lies in the fact that the publisher, in the first instance, is not a party to the agreement. The first, and most important, agreement is the one between the author and the publisher. This is the agreement which governs the relationship between the two parties. It is this agreement which is the basis of the publishing industry. It is this agreement which is the basis of the publishing industry. It is this agreement which is the basis of the publishing industry.

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books

Scientifically speaking—and thinking

Brian Holmes argues that Nuffield science has done more harm than good

Spunk helped to persuade Congressmen that the high schools were to blame for America's failure to beat the Soviet Union in the space race. Nicholas de Witt's statistics satisfied them that Soviet schools were turning out more and better qualified scientists and technologists than American schools, and Congress voted funds in the 1958 National Defense and Education Act to bring physics, chemistry and biology syllabuses up to date and make them more demanding. Congress also made sure that billions of dollars were made available to NASA to coordinate a successful programme to put the first man on the moon.

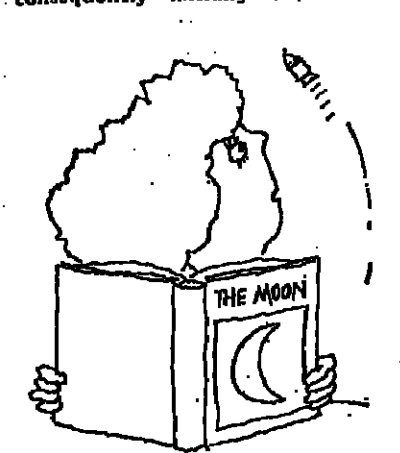
While American university scientists were trying to make high school science education more academic in the light of proposals made by the Physics Science Study Committee (PSSC), the CHEM Study and the Biological Sciences Curriculum Study (BSCS), the 1958 Soviet law "Bringing Education Nearer to Life" was designed to make science education less academic by relating all aspects of it to the productive life of a socialist economy.

American reforms and Nuffield Science illustrate the dangers of using unsophisticated comparative arguments to promote change. To be sure, in the 1950s most school science syllabuses for potential scientists needed to be brought into line with post-relativity philosophies of science.

Throughout Europe physics syllabuses and textbooks were similar. The content was organized according to the historical development of the subject—properties of matter, heat, light, sound and magnetism and electricity. Only American prescriptive educationists suggested that the content of education in a mass system of education should be organized on the basis of the social problems people would face when

they left school, rather than on the problems of interest to physicists, chemists and biologists.

The need for "physics for all" was recognized by Donald McGill and some members of the committee convened by the Institute of Physics in 1962. After McGill's unfortunate death the initiative in Nuffield Science slipped into the hands of science teachers who devised syllabuses, not for all, but for potential candidates. Nuffield Science consequently initially tackled an



American problem and neglected a more pressing English curriculum problem. This is confirmed by the United States National Science Foundation programme which brought carefully selected British sixth forms and other European science teachers to the United States to run summer workshops for American high school teachers.

Nuffield science educationists acknowledged the value of PSSC, CHEM Study and BSCS syllabuses and the rhetoric of "understanding concepts" and "learning by discovery" with realizing that John Dewey's understanding of these

terms was very different from those of H. E. Armstrong which still inform discussion in the School Science Review.

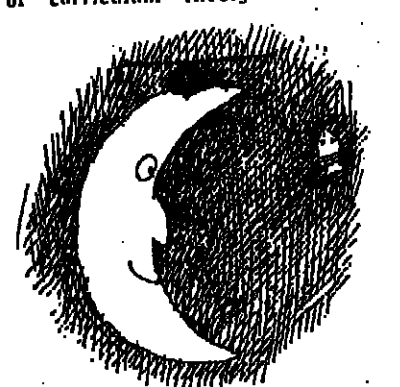
On the basis of old-fashioned concepts of scientific method and pedagogical theories, Nuffield science educationists tackled a problem more appropriate to elitist than to mass systems of secondary education. They failed to build on the challenge offered by Lancelot Hogben in *Science for the Millions* and by Joseph Lauwerys, who in the 1930s was advocating the introduction of general science into schools. They seemed to have missed pioneering efforts published in the 1940s by The Pilot Press and by Methuen.

However, some new primary school books, informed by Piaget's theories, do introduce a human element. Examples are the Macdonald Education series, *Advances in Science* and the Collins series *Building Bridges*. But "discovery" methods, in such series as Longman's *Town and Country*, are still associated with a nineteenth-century view of scientific method.

At the secondary level the traditional sequence—observe, experiment, compare, then generalize—as a prescription for acquiring an understanding of science method is explicit in the John Murray/ILEA *Advanced Physics Project for Independent Learning* and takes no account of John Dewey's method of discovery or of Karl Popper's hypothetico-deductive method of scientific inquiry. It is not surprising then that in post-Nuffield science educationists textbooks data is classified in accordance with key concepts such as energy, waves and the structure of matter rather than concepts such as heat, light and sound.

The topic approach finds expression in series published by Edward

Arnold, *Unit Studies in Science*, Butterworth's *Study Topics in Physics*, Blackie's *Getting to know Physics*, Harcourt International's *CSE Physics*, Heinemann Education's *Nat. Phil. "O" Text*, Longman's *Physics Topics*, Physics 11-13, and Revised Nuffield *Physics Pupils' Text*, John Murray's *Physics for Teachers* and *Tomorrow's Physics* and Kegan Paul's *Secondary Science Series*. The absence of a major shift in the philosophy of science or curriculum theory no doubt



accounts for the continued appeal of revised texts by well-known authors such as M. Nelson, G. R. Noakes, A. E. E. McKenzie and others.

Initiatives taken by the Schools Science and Technology Committee under the chairmanship of the Duke of Edinburgh seem to have borne more fruit. Books under the general editorship of F. R. McKim and published by Wheaton/Pergamon in the series *Technology in Society* show how Soviet polytechnical theory can be realised, modified by another context, in science courses designed for all rather than the few who are potential university students.

In Eastern Europe attention has been paid to the reform of science syllabuses in the light of polytech-

nical theory, the aims of which to build a new socialist person and relate education to work. Western Europe the introduction of new mathematics and science syllabuses has been gaining ground. A National Centre for European Nuffield science textbooks in the United Kingdom, and the activities of the Council of Europe have also strongly fostered this ideal. People are now discussing ways in which the content of school books could be made more European in emphasis.

Investment from the publishing industries of the member countries of the European Community is therefore being requested in order to further this aim. Little, however, has been said about the state of public funding in terms of supporting and sustaining such projects. This is not surprising. Those who are familiar with the difficulties involved in collecting centralized statistics from government and trade sources will know that it is a rigorous task to obtain reliable information on the situation in one country, let alone from a group of nations. Particular problems arise over statistics on school book spending which are frequently "judged" under the heading of general expenditure on school equipment.

What is written in this article must therefore be treated with some caution. I must acknowledge the urgent help which I have received from the officers of the British Council, from the publishers' associations, the member countries and the International Publishers' Association, and from the research undertaken by Euromonitor Publications in their survey of *Book Markets in Western Europe*. Without the assistance of these sources, it would be impossible even to begin to sketch a picture of European school book provision. Information is still being received, so the remarks which follow must be regarded as purely indicative.

How much do we spend?

John Davies offers a preliminary survey of the relative levels of public spending on schoolbooks in the countries of the EEC

Over the last few years, the concept of European, as opposed to national, education has been gaining ground. A National Centre for European Education has been established in the United Kingdom, and the activities of the Council of Europe have also strongly fostered this ideal. People are now discussing ways in which the content of school books could be made more European in emphasis.

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most recent statistics show that this averages around £5. Traditionally, all school books in the United Kingdom have been purchased by local education authorities. The Secretary of State recently caused a certain amount of consternation by suggesting that there was nothing wrong in parents purchasing certain books for school use. He has since made it clear that he intended this to be an supplement, rather than to replace, local authorities' statutory obligation to provide sufficient equipment for children's education.

British publishers who trade with the Republic of Ireland, which has a school and student population in the region of one million, report a healthy amount of business which suggests a higher level of provision than in other parts of the British Isles. In Ireland, however, only a percentage of the money required for books is provided by the state. The residue comes from the parents, and a larger contribution is required from them at secondary as opposed to primary level. This system has recently been the subject of criticism and resentment in the Irish Parliament.

France The French educational system is subject to far more central control than that of the United Kingdom, where expenditure varies greatly between local education authorities and spending in one part of the country can be very much higher than in another. The French system, which has been subject to relaxation in recent years, may have disadvantages in British eyes, but does seem to ensure a higher standard of provision. Around £50m worth of textbooks are purchased for France's schoolchildren which, with library books, would be more than double the British average. This level of spending is sustained for the larger student population where per capita expenditure in 1979 works out at £10.78. In primary schools, the provision of school books is the responsibility of the commune or municipality. Books are supplied for the first four years of secondary school and the national budget for 1979-80 for this amounted to £13.5m.

Italy Italy's figure for sales per student is marginally below that of the United Kingdom at £8.58 in 1979. The school population is about five million, and all books are purchased by the state at primary level at a cost of around £10,500,000. Books at secondary level are provided only at low income families, and the expense incurred by this is around £3m.

Netherlands Expenditure per student in the Netherlands stood at £12.26 in 1979. The educational system here has much in common with that of the United Kingdom and the Dutch educational publishing industry has a high export output. There are over two million schoolchildren in the Netherlands and expenditure per head more than doubles that of the United Kingdom.

Belgium and Luxembourg The number of schoolchildren in Belgium is also just above the two million mark, and Luxembourg, with a school population of 50,000, is closely linked to Belgium for administrative purposes. Sales of books per student appear to be the highest in Europe at £20.50. Books are free throughout the primary sector, but there is no subsidy for the secondary sector where books have to be bought.

Denmark There is little rotten in the state of Denmark where sales per student reached £13.69 in 1979. The school population is around 800,000, and a new school law called for larger expenditure after 1976. The Danish Government has been subject to relaxation in recent years, may have disadvantages in British eyes, but does seem to ensure a higher standard of provision. Around £50m worth of textbooks are purchased for France's schoolchildren which, with library books, would be more than double the British average.

Germany In the Federal Republic of Germany, school provision is the responsibility of the regional educational ministries. Figures for 1979 of these regions show that around £154m was allocated for learning materials for 1980. Book sales per student in 1979 have been calculated at £12.49.

The situation which emerges is not unattractive. The United Kingdom, Italy and Ireland are very much the "poor relations" of Europe in terms of state provision of school books, regardless of whether parents make a contribution or otherwise.

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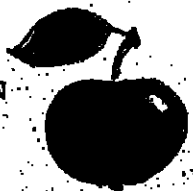
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Alive and well

John Davies on the future of the book

"One of the most startling features of the Computer Revolution is that print and paper technology will appear as primitive as the pre-Caxtonian copying of manuscripts seems to us. In sum, the 1980s will see the book as we know it, and as our ancestors created and cherished it, begin a slow but steady slide into oblivion." Thus spoke Zarathustra—or, more specifically, thus spoke Dr Christopher Evans in his book *The Mighty Micro*, published in 1979, in a chapter entitled "The Death of the Printed Word."

It is interesting that the author chose to deliver his apocalyptic message through this decaying medium of print, and it is salutary to look back over the progress of similar prophecies. In the 1950s it was predicted that the widespread use of television would kill the book. Television found a very important role in our society, our leisure and our educational system, but this in no way affected book sales or the future of the book. In the 1960s Marshall McLuhan leaped "hot media" and foretold the crumbling of the Gutenberg Galaxy. Nothing happened. Schools and colleges were warned to prepare themselves for an audio-visual revolution, but the "white heat of technology" melted and left a soggy mess on the doorstep—stock cupboards full of unused equipment. People picked up their books and carried on. We were told that all libraries would in the near future contain only collections of microform. Microform has established itself as a useful medium in some circumstances, but only a tiny fraction of the nation's library information stocks are at this date on microform. Many publishers have already burnt their fingers

on the expensive production of computer assisted and programmed learning projects. We are assured that this time it will be different, that the microcomputer really will replace the printed word, but recent modern history raises some questions which must be answered.

The protagonists of information revolutions have tended to be their own worst enemies. Extravagant claims have been made for new media long before those media have had the potential to deliver the goods. Disappointment has turned into disillusionment, and the new inventions have not in consequence received the attention they merited. The innovation which has had the greatest effect on the use of the printed word has been, largely unused in this context, the ubiquitous photocopier, in every office and library and on almost every street corner. Its widespread and sometimes illegal use has had far more influence upon the publishing industry than any of the other developments for which such great advantages have been urged. The photocopier has, quite simply, proved itself capable of delivering immediately the information which people want.

The purpose of this article is not to deny the capabilities of the new technology. It does indeed seem possible that by 1990 anyone requiring a document will be able to call up references from a database, read the text on the terminal and print out copies of what is required. Along the road to this Maccas there are certain obstacles, which may be surmounted, but which at present seem to be largely being avoided.

First, how is the huge mass of information which is now available in the printed word going to be converted so that it may be used in this way? And at what cost? This was the great stumbling block of the so-called audiovisual revolution. What is to be the eventual cost of using such systems? If it is prohibitive, the system will founder. Is

the system likely to be more readily available than its existing prototypes? Will the format be sufficiently portable and accessible to compete with the word? When will graphics, diagrams and text presentation reach higher standards than those presently shown at PRESTEL, for sales of sets downwards of 50p?

These issues cannot be answered overnight. Publishers are beginning to make material available in electronic form, but doubt the micro-chip information revolution will, like water, find its own high at present level. If it does not mature, the level of editing and selection associated with current print publication, the skills reflected in editorial and production systems, will have no chance of survival.

Already signs that the content of education in actions to electronic publication are not wholly enthusiastic. The *Electronic Journal of Psychology*, a journal of the United States and the United Kingdom, is a case in point. It is a journal of psychology, but its content is largely in the form of abstracts and summaries of other journals. It is a journal of psychology, but its content is largely in the form of abstracts and summaries of other journals. It is a journal of psychology, but its content is largely in the form of abstracts and summaries of other journals.

University lecturers working in new information systems are not wholly enthusiastic. The *Electronic Journal of Psychology*, a journal of the United States and the United Kingdom, is a case in point. It is a journal of psychology, but its content is largely in the form of abstracts and summaries of other journals. It is a journal of psychology, but its content is largely in the form of abstracts and summaries of other journals.

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Close harmony

Brian Holmes looks at the barriers to curricular 'harmonisation'

Serious attempts are ever made by the EEC to harmonise secondary curricula, related obstacles face reformers. It is preposterous to suppose that the curriculum should be included in school curricula, mathematics and the natural sciences should take pride of place. Modern languages should replace the classics and mechanical drawing should be included in an encyclopaedic curriculum. The history of curriculum reform in Western and Eastern Europe, excluding Britain and the Soviet Union, has been one of trying to get rid of Greek and Latin and marginally to reduce the numbers of required subjects.

Soviet polytechnical theory has its origins in Robert Owen's factory school in Lanarkshire. Encyclopaedic in scope, the intentions behind the curriculum are that the socio-economic implications and practical applications of whatever is taught should be made explicit. In the present British teachers have more successfully related pure knowledge in the natural sciences to its applications in industry than have Soviet teachers, who for the most part cling to what is the most part of a scientific approach to learning. In other words, in Eastern Europe as in Western countries the intellectual concern to university linguists, historians, mathematicians and scientists have dominated the curricula of secondary schools.

It is no longer the case in many British primary schools where Herbert Spencer's answer to the question "What knowledge is of greatest worth in providing a general education?" The curriculum of secondary schools is dominated by the natural sciences, mathematics and the physical sciences, which are usually seen as the most valuable subjects for the internal coherence and have

been legitimised by teachers and by tradition.

To the same question the French encyclopaedists gave another answer by arguing that all knowledge based on the historical development of subjects should be included in school curricula. Mathematics and the natural sciences should take pride of place. Modern languages should replace the classics and mechanical drawing should be included in an encyclopaedic curriculum. The history of curriculum reform in Western and Eastern Europe, excluding Britain and the Soviet Union, has been one of trying to get rid of Greek and Latin and marginally to reduce the numbers of required subjects.

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books

The German jungle

Michael Klett maps out an obstacle course

It was, I think, in the mid-sixties. The German subsidiary of an American electronics firm was developing teaching machines and was trying to take over a schoolbook publisher, when the parent company was reported to have sent a telegram saying "hands off German school market stop too complicated stop".

It must have been an easy decision. The school market has developed since the Age of Absolutism must have been much more incomprehensible to the Americans than to us schoolbook publishers, and even we can barely find our way through the forest of laws, regulations, fiscal arrangements and political squabbles. What follows is a series of general principles on which German schoolbook publishers must base their strategies.

The eleven Federal States are autonomous in matters of education and culture. Each of the 11 ministries of education determines the curriculum to which schoolbooks must be tailored.

Our firm currently uses 2,089 curricula, each with an average length of 120 pages. The usual product is a printed book which must be submitted at fixed times to the authorities for approval. Where there is autonomy, there is the tendency for it to increase. The curricula are becoming more different every year because Germans have embraced the fashion for local patriotism particularly avidly, as a reaction to enforced uniformity under the Nazis and the more recent standardization of the technical world.

In addition there is the political conflict of Conservatives versus Social Democrats. Baden-Württemberg, Bavaria, Lower Saxony, Rhineland-Palatinate, the Saar and Schleswig-Holstein are tinged with the Conservatives' blacks; Berlin, Bremen, Hamburg, Hesse and North Rhine-Westphalia with the Social Democrats' red. Ministers, civil servants and party bureaucrats are vigilant to ensure that the direction taken is correct. Since, however, opinions are by no means unanimous within any given party, curricula often have a short life.

The multipartite school system. Only at primary school, which children attend from the age of six to four years (in Berlin six years), is the system uniform. From the ages of 10 to 15 children can



choose between three different schools, or they are sent to them often as a printed book. Children are generally prepared in the Hauptschule (secondary modern) for a practical trade, in the Realschule with its leaving certificate the Mittlere Reife (Medium Leaving Certificate) for middle administrative and technical posts and in the Gymnasium (grammar school) with its legendary leaving exam, the Abitur, for academic studies and, if possible, for professions. Children from the Hauptschule and the Realschule can go on to vocational Colleges of Further Education with specialized courses in technology, administration and business studies etc. Gesamtschule (comprehensive schools) form another small but significant strand.

These are the bare bones. If I were to add the flesh, the variants would be almost endless. Now imagine the publisher's problem. In some subjects different books must be offered in different Länder for each level. Let us suppose it is worthwhile producing

geography books for three Länder. That means four books for the four years in the Hauptschule, six for the six years in the Realschule and nine for the nine years in the Gymnasium. That makes 19, for three Länder a total of 57 editions, each of which must have a teacher's book, work book and the like to accompany it.

Moreover, like their counterparts in other countries, German publishers must also watch the professional debates closely. Sometimes opposing camps can emerge within one discipline, each seeking to influence the curriculum of their particular Land. And then they must monitor the intersubject battles for the limited number of hours in the week. Here, fierce arguments often rage. The geographers may opt for the terrifying realism of the rising level of world consciousness because children are getting one geography lesson less a week; the historians lament that our own culture is being extinguished, our identity lost, because in some Länder no history is taught in the first two years of the Gymnasium. As far as I can judge, only English teachers are happy: their generous allocation of lessons is seldom interfered with.

All this means, of course, that there is little room for anything new. A state which has attained world prominence through its technological and economic power cannot find the time to provide education about the internal structure and implications of this power. Architecture, psychology, and urban studies, to take three examples, are rarely taught in schools.

Teachers are civil servants. This fact may seem to have little to do with my argument, but it is an additional influence on curricular conformity. As a body of civil servants, teachers in Germany form a more or less closed hierarchy, whose most gifted members (often excellent authors of school books) tend to move through headships into administration. State approval can entail a long process. While "additional" materials like

approved, "necessary" books may be submitted, after printing to the authorities, there then follows a period of waiting, during which the ministry sends the book to experts who are in some Länder, members of a commission including representatives of the churches, unions and employers, as well as academic specialists, as well as take more than a year to go through.

If the book is rejected, the school business begins. The expert who has checked whether the book conforms to the laws of the state, question, how it measures up to the curriculum trends, whether it is accurate, whether it is couched in a style suitable for its readership, whether its binding is durable, and whether its price is reasonable.

Most rejections are on curricular grounds, and it sometimes seems that these result from the inability to cope with anything innovative or original. Public opinion, however, can challenge the ministry's verdict by bringing in one of their own: the official who has to adjudicate, who is reduced to calling in yet more experts to bring matters to a decision. The system works with most people involved being regular contact, and publishers that as a last resort they can recourse to the law: there have been cases of publishers winning their case in court.

When a book has been approved it then goes out into the world with the aid of publishers' representatives and advertising very much as it is. But there are some Länder, where teachers are not free to choose their books, with the selection being carried out centrally. And in one other respect the system differs markedly from that of the United Kingdom: in all but one of the Länder, the schoolbooks are bought either by the State or by the parents, and they are then lent or given (in the form of an exchangeable at bookshops) to pupils.

have made their fortunes through illegal publishing.

But piracy tends to elude the grip of the law. First the illegal books have to be identified, and many copies are so good that only the publisher can tell the difference. Then they have to be traced to source, which can be outside the country concerned. Governments and local publishers and agents are all anxious to see piracy stamped out and action on their part has sometimes been effective. But corruption and nepotism help to keep pirates in the clear, and dragging local court cases can be an impossible drain on publishers. Even so the upsurge in piracy is forcing publishers to think more carefully about possible action. The Association of American Publishers has set up a special committee to look into the problems, while in London Malcolm Rolands, of the

Book Development Council, the international arm of the Publishers Association sits with files of evidence collected against the Singapore operator on his and place of illegally copied books in a cubby hole down the

Even so, he feels publishers turn their minds to the problem of students in the developing world. Speaking in Cairo earlier this year he outlined the problem. "Book piracy is a forgery and it can no longer afford to ignore inflation in the shape of ever rising prices of books needed for education and research. If it were to print on poor quality paper and of lower standards, then so be it."

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Van Gogh and the poet Longfellow have rated *The Mystery of Edwin Drood* high, if not highest among all Dickens's works. Others, like Wilkie Collins (who rightly suspected an attempt to cash in on his own profitable and popular new invention of the mystery thriller), viewed it as a hopeless failure.

Admittedly crude plotting, paragon characterisation, trite sentimentality and frequently mechanical humour all suggest what Collins called "a last laboured effort, the melancholy work of a worn-out man". But this was precisely what fascinated Longfellow and Van Gogh: the six surviving serial parts of *Edwin Drood* (there were to have been another six) are literally the last melancholy workings of the dying Dickens who meant to be buried in Rochester, decayed and morose, in the city of his youth as Coleridge, scene of his murder and home of his murderer John Jasper, a place of bleak perspectives and strange light dominated by the cathedral to which people who grew up in Coleridge's return in spirit in their dying hours. . . . when the circle of their lives was very nearly traced, and the beginning and the end were drawing close together.

But there is still a third party of *Drood*-fanatics, or Droodists, for whom the book is a kind of ideal, perennial *New Statesman* competition combining elements of presidentialism with literary impersonation and more than a touch of Kim's glamorising the mystery being, after all, the question of how, more of achievement, the nearest and most elegant deployment of such elaborately signalled clues as *Drood*'s ring, Durdles' key and Jasper's scarf, not forgetting peripheral points like the precise part played by quicklime and the true identity of Datchery. Of the two, latest in Dickens's long line of posthumous collaborators, Charles Forsyte has taken a slight edge over Leon Garfield, at least in the decorative exuberance with which

he eventually strangles Jasper in his own celebrated scarf, and un-masks Datchery as not only Bazzard (a bold move this, relying on dubious evidence from the incomplete and apocryphal "Sapsea fragment") but also too.

As Droodists, these two are on what Felix Aylmer called the orthodox side, both favouring versions of the classic solution along Jekyll-and-Hyde lines, both well to the right of radicals like Howard Duffield (who in 1930 ably defended Jasper as a victim of the Indian cult of Thuggee, obliged to strangle Drood in order to placate the goddess Kali) or Aylmer himself (who, in 1964, put up a second brilliant defence, exonerating Jasper as a wholly innocent victim of a crafty frame-up).

No Droodist, so far as I know, has yet come forward to make out the case against my own favourite, Jasper's bugbear, the Reverend Septimus Crisparkle—a likely murderer if only on the grounds that he was a voracious eater, like his creator with flatter credentials ("God follow! Manly follow! And he was so modest, too. . . . So all true souls ever, and ever will be").

But if anyone were capable of pinning the crime on Crisparkle, it would surely be Forsyte, himself a crime writer who starts his *Decoding* with a long and fascinating investigation into his own and all previous attempts at finishing *Drood* off. Forsyte's speciality in this line is the detection by close textual analysis of underlying menace in scenes and objects as apparently innocuous as, say, Mrs Crisparkle's medicine cupboard or the end-of-term free-for-all at Miss Twinkleton's Seminary for Young Ladies. This last begins with the observation that "it would expire tomorrow" ("Then comes the first sinister note with 'expire tomorrow'") and works up to a pitch at which Dickens can't mention closets, trunks or the young ladies' face creams without Forsyte construing tombs, coffins and quicklime.

This sort of fanatical sleuthing is meat and drink to your true Droodist, for whom the term "mystery" has reverted to its original medieval meaning of something intricate, arcane and private with which the layman would be unwise to meddle. At its best, Forsyte's strictly non-literary, intellectual and deductive method comes close to the compelling clarity and queer logic of

Lewis Carroll; its drawback is the inevitable anticlimax when we come to his actual, final conclusion to the story with its lifeless style, clumsily copied catchphrases and synthetic versions of characters most of whom were little more than Dickensian stereotypes in the first place.

Garfield's much trickier approach is not so much imitative as dramatic. Where Forsyte's Dickensian pastiche is both weird and vivid in the style of Mme Tussaud at her worst, Garfield's is, as it were, a very passable Mike Yarwood impersonation: amazingly like, and so entertaining that the switch of authors half-way through is less like passing from Dickens to Garfield than from the haughty, decayed and brooding Dickens who saw his circle nearly traced to the ebullient Pickwickian youth (Garfield strengthens the illusion by inserting a narrowly averted breach-of-promise case, and some memorable amateur theatricals) who first used Rochester as a setting more than thirty years before.

Garfield's Dickensian breeziness and bounce is impossible to convey in brief quotation, though perhaps one may get some faint flavour from his broaching of the Sapsea tomb—

"The odour within was hideous, like a huge poisoned success—or his equally grim image of Datchery's landlady 'opening her mouth and displaying what appeared to be a worked-out vein of mutton chop. . . . Several of the feeble characters positively perked up under this energetic treatment: Garfield's Crisparkle, for instance, is decidedly less of a stick than Dickens's manly fellow though, conversely, Jasper himself becomes altogether milder and more straightforward than the sombre, enigmatic and obsessive creature who seemed, like his Coleridgean setting, in some sense an emanation of Dickens's new world of uneasiness and ambivalence."

But what the story loses, surprisingly speaking, it makes up in "vim and gusto" (the second murder, almost obligatory for Droodists as for Agatha Christie, is admirably managed) and a genuinely pathetic ending. All in all, one can't help feeling that, if Forsyte's version is a curio for Droodists, Garfield's would have been a godsend to Dickens's publishers and public when the serial was so drastically cut short and Wilkie Collins could not be persuaded to conclude it.

The knowledge to learn what we should learn

Jack Cross

No Limits to Learning: a report to the Club of Rome. By James D. G. Mitchell, Mahdi Elmandjra and Mircea Miclea.

Edinburgh £6.25. 08 024705 9. £3.00. 08 024704 0. The Education Dilemma. Edited by the World Bank. By John H. Korten. £13. 08 024304 5. £6.50. 08 024303 7.

One piece of naive Victorian arrogance that more and better education comes as a gift from metropolitan centres to the lesser breeds without the Law" is the belief that knowledge is something like a commodity to be hoarded by the few and passed on to the many. The world is beginning to realize that accepted notions of learning are not only wrong but also, in the case of the developing countries, are becoming less and less applicable to the very societies in which they evolved.

Global overviews, prepared by teams of experts, often tend to indulge in large generalizations. *No Limits to Learning* is an exception in that it develops its attractions to the reader in a series of case studies, each with its own set of points, its own set of traditional educational assumptions, its own set of new assumptions, its own set of new assumptions, its own set of new assumptions. We are not, however, dealing with the past, but with the future, and the past has sprung out

of the shock of events like revolution, national defeat or technological change. Equivalent stimuli in the contemporary world may be termed "dilemmas".

Essential innovative ingredients are anticipation (cultivating a sense of the future), participation and contextualization—the concept of value-free knowledge can be as absurd as the notion of value-free education. The African children to study Woodward's poem about daftness in order to pass their O levels. The reader is asked to be wary about identifying education with schooling, schooling with qualification, schooling with the ladder of social mobility. This may be understandable in societies where the ratio of educated to uneducated is something like 20:1, but it effectively diverts much needed intelligence into unproductive channels while producing generations of under-employed, over-qualified, and economically irrelevant graduates.

"A dilemma," writes John Simmonds, "is a choice between alternatives which are equally unsatisfactory to people making the choice." The Education Dilemma, for developing countries, must involve the allocation of scarce resources. Should they opt to expand the secondary and higher sectors, concentrate on the first nine years, or invest in programmes of non-formal adult learning? The first may be good for national prestige and be desired by influential members of hierarchies but it is the

Children's literature

Weapons against dullness

John Horder

Curious Tales. By Milos Macourek. Oxford £3.95. 19 271427 9.

Tell Them Again Tales. By Margaret Hodder and Stoughton £4.25. 340 25284 7.

Proud Lady in a Cage. By Fred Urquhart. Paul Harris £5.95. 904505 90 1.

Tales of Mozambique. Preface by Young World Books 905405 04 8.

The Poetry of Horses. Edited by Samuel Carr. Batsford £4.95. 7134 2594 6.

Charm and style in *Curious Tales* are meant to compensate for not much going on beneath the surface. They do not. Mr. Macourek's imagination goes over the top in "Ottile and the inkblots", where Ottile physically disappears when not covered by inkblots, and in "A home for six thousand alarm-clocks", where the alarm-clocks experience nirvana, or something like it, after being brutally battered on the ears by an over-zealous policeman like a sea full of Gulf Stream flocks of larks and sailing boats, and lots of frozen fruit all put together."

No doubt all this will go down a bomb with parents. Adolf Born's stylish illustrations certainly will. But children, whose appetites can be a good deal coarser, may not be so pleased. In *Tell Them Again Tales*, a re-issue first published in 1933, Margaret Baker demonstrates an all too facile gift for churning out stories with beginnings, middles and ends. Nothing wrong about that you might think—and you'd be wrong. Miss Baker's cozy, over-protected view of

life grates terribly in 1980, a fact Hodder might care to note before re-issuing any more of her thirty-six other books.

Bella Logan, the heroine of the title story in *Proud Lady in a Cage*, a twenty-two year old obsessional neurotic who knits constantly, is asked to take charge of the enquiry desk of a new supermarket. Soon she is besieged by darts of icy cold piercing every part of her body, a rope almost choking her and other such sensations. The interplay between her work at the supermarket and her remembrances of a past incarnation are well managed by Urquhart. But some of his others are so deluged in dialect they will be harder for non-Scottish readers to make sense of. Footnotes at the bottom of each page, as in Wendy Wood's *The Silver Chatterbox*, would have improved matters no doubt.

Eight of the 33 stories in *Tales of Mozambique* are about rabbits. Of reason is given in the introduction: he "possesses no other weapon except his intelligence". The aim of these stories is "as a weapon against dullness, passivity and lack of initiative". There is enough here to sustain several readings. Lastly, Samuel Carr's *The Poetry of Horses* is a good idea for an anthology. But Ted Hughes's "A Dream of Horses" should have supplemented his "The Horses", and Roy Campbell's "The Rodeo of the Centaurs", his "Horses on the Camargue". D. H. Lawrence's definition of the horse from "Appocalypse" would have been in place: "The horse! The horse! The symbol of surging potency and power of movement, of action in man."

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books

Paperbacks

Female factors

Katharina Dalton

Why Children? Edited by Stephanie Dewrick and Sybil Grundberg. The Women's Press £2.75. 7043 3855 6.

The Birth Control Book. By Howard I. Shapiro. Penguin £1.95. 14 04629 8.

Our Bodies Ourselves. Edited by Angela Phillips and Jill Rokison. Penguin £3.50. 14 00 443052.

Lifting the Curse. By Beryl Kingston. Ribury Press £1.95. 85223 162 8.

A Woman's Health. By Gillian Strube. Croom Helm £5.50. 7099 04 11 8.

To women of the pre-Marxist Stages era, having a child represented either a gift from God or the natural result of maturity, and little time was wasted thinking about methods of contraception or options on abortion. Today, the decision to propagate demands conscious effort. Reproduction is neither automatic nor inevitable. To enlighten the debate from the feminist viewpoint, *Women's Bodies* has been compiled. It is an essay, mainly by American journalists, on the subject *Why Children?*

All are well written with an easy style, but vary in different pictures. *Why Children?* is a collection of essays, including the lesbian result of maturity, and little time was wasted thinking about methods of contraception or options on abortion. Today, the decision to propagate demands conscious effort. Reproduction is neither automatic nor inevitable. To enlighten the debate from the feminist viewpoint, *Women's Bodies* has been compiled. It is an essay, mainly by American journalists, on the subject *Why Children?*

Those on the brink of the menopause or beyond need not concern themselves with *The Birth Control Book* by Howard Shapiro, described as "the most comprehensive and candid guide to birth control ever published". He is determined to throw his readership net wide enough to embrace everyone from the elementary schoolgirl who has yet to learn the anatomy of the reproductive organs, to the post-graduate doctor who may want to know the names of various operative techniques for ligation of the tubes. It is written in a simple question and answer style, well illustrated by simple figures and is comprehensive. For instance, it con-

tains a table giving 35 ways of managing the side effects of oral contraceptives, although ignoring the problems presented by the pill in those suffering from premenstrual tension. (A word not even mentioned in the index, which does include "oxytocin" and "spackmann castula"). This book was first produced in America in 1977, and has been Anglicized and published by Penguin. One is left wondering if the English really are as eager as the Americans for such obscure information.

Another American book, which is a pleasure to see this side of the Atlantic, is *Our Bodies Ourselves* described as a "health book for women". It was originally published by the Boston Women's Health Book Collective in 1971 but has been updated and Anglicized by Angela Phillips and Jill Rokison. Again, this is a book produced by a feminist group with the English really are as eager as the Americans for such obscure information.

Gillian Strube's book *A Woman's Health* is an interesting diffuse essay on primary health care, but it is not clear for whom the book is written, as it has no instructions apart to laymen or doctors, and surely the primary health care teams already know the subject. Her aim is to "identify some of the foundations of the health of women", but it deals more with disease than health.

In the old days the general practitioner saw both health and disease, but now the ancillaries in the health team see the healthy, while the diseased are referred to the general practitioner, just as in hospital the consultants' experience is limited to the diseased.

Beryl Kingston, on the other hand, knows exactly at whom she is aiming her book *Lifting the Curse*—those unfortunate women who suffer "the aching miseries" or the cramps with each menstrual cycle will appreciate it. Here is a brief, readable book, written in a simple style, which aims to help women to identify their problems, either premenstrual syndrome or spasmodic dysmenorrhoea, giving practical tips on how to cope, and sensible exercises and relaxation techniques to minimize symptoms. As an established lecturer with the National Childbirth Trust, she had practical experience of preparing expectant mothers for relaxation in childbirth and then realized that women who experience mini-labours at home would benefit from this book.

Down to earth

W. G. V. Balchin

Process in Geomorphology. Edited by Clifford Embleton and John Thornes. Edward Arnold £8.95. 7131 62449.

Geography and Soil Properties. By A. F. Elty. Methuen £10.00 and £5.50. 416 71540 0.

Geocryology. By A. L. Washburn. Arnold £27.50. 7131 6119 1.

Geomorphologists continue to be well served by their authors as a flow of new and revised books continues unabated. The current interest in the environment doubtless provides a partial explanation as geomorphology is of interest to geographers, geologists, biologists, planners and civil engineers.

Process in Geomorphology combines the work of six leading British geomorphologists and reflects the growth of interest in process geomorphology which has taken place in the post-war period. Earlier studies had been undertaken largely by civil engineers concerned with fluvial processes in connection with river control or the stability of slopes in connection with road works, or sea defences in connection with coastal erosion.

A systematic process approach to fluvial, glacial, arid and marine erosion has more recently become a feature of many university courses in geomorphology and the current book arises from such a course in the Joint School of Geography at King's College, London and the London School of Economics.

The initial chapters survey the nature of the energy involved, forces and resistances, the properties of materials and the nature of fluid flow. Groups of processes are then systematically considered—weathering, mass movement, fluvial, glacial, nival, aeolian and marine—with a concluding chapter reviewing interrelationships. The book is well illustrated with 30 plates and numerous maps and diagrams, whilst for the researcher there are over 1,100 references.

Geography and Soil Properties concentrates upon the study of soil from a geographic point of view, attention being drawn to the significance of spatial changes in soil patterns, the environmental influence on soils and on their temporal changes. There is also a systematic examination of soil properties, and the significance of human activities is considered in a broad context with numerous practical examples. Other important topics covered include the mineral composition of soils, their organic matter, structure and porosity, chemical make-up and mechanical properties.

It is often said that it is in the study of soil that the physical and human geographers inevitably meet. This comprehensive introductory text will certainly provide valuable background reading for geographers, planners, environmentalists and those concerned with land-use. It is well illustrated with line diagrams and maps and is further supported with a bibliography of some 800 references.

Geocryology is a new revised edition of a book which was first published in 1973 under the title *Periglacial Processes and Environments*. The aim of the author is to provide a comprehensive overview of periglacial processes and their effects, both past and present. Although claiming to be neither a formal textbook nor a reference manual the book in fact fulfils both functions. It must certainly be the most advanced text currently available in this field.

Fourteen chapters cover mental factors, frozen ground, action processes, periglacial mass wasting processes, snow, silt, siltation, fluvial, lacustrine, marine action, thermokarst and environmental reconstruction. The text is illustrated with maps, diagrams and photographs, whilst Professor Washburn has attempted a comprehensive examination of the enormous volume of search papers now available in the field—the book concludes with pages of references totalling 2,500 individual papers and book titles.

This data bank of detailed information cannot fail to be of immense value to researchers in periglacial phenomena. It is a recent addition to the literature, recently that civilized man attempted to live in periglacial areas and other problems of the thermokarst have been completely new situations requiring completely new solutions. *Geocryology* will undoubtedly be a standard text for all those who study these problems.



North and East

Philip Sauvain

Scandinavia. By Gavin Orton. Eastern Europe. By Peter Barker. Macdonald Countries Specials £2.75 and £1.75.

This new series of books, developed from the Macdonald Countries series, has been "designed to cover groups of countries which are of particular political or geographical interest".

There is no clash here with any of the individual volumes in the earlier series, although they share a similar style of production, with clear full colour illustrations, excellent maps, detailed reference pages, and an emphasis on people rather than on country. This could have been something of a minefield in view of the postwar history of Eastern Europe but Peter Barker treads

sensitively, and succeeds admirably in presenting a balanced, lively and readable text. The same can be said of Gavin Orton's *Scandinavia*.

In both books each topic is covered on two facing pages. Sources are written in a common format, as are sport, education and shopping. While others are of individual interest, such as "The Danube—artery of Europe".

There are few faults, although it is a pity that the Dalmatian coast of Yugoslavia is captioned as being "many deep, wide lakes" when the fact that a "Dalmatian coast" is usually taken by geographers to be a distinctive type of coastal formation, contrasting with that of the Danube, is a quibble. In general the detailed captions do appeal to these attractive books.

Equipped for technology

F. W. Kellaway

Mathematics for Engineering Technicians. By K. A. Stroud. Stanley Thorne. £4.20. 85950 088 8.

Mathematics for Engineering Technicians Book 2. By K. A. Stroud. Stanley Thorne. £2.95. 85950 098 5.

Mathematics for TEC Level II. By A. Horner. Heinemann Educational. £3.50. 35 71083 4.

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Mathematics for Electrical Technicians Level 3. By J. O. Bird and J. C. May. Longman £5.50. 582 41176 9.

Mathematics Exercises Level 3. By B. W. Smith. Stanley Thorne. £1.00. 85950 485 9.

Mathematics Exercises Level 2. By B. W. Smith. Stanley Thorne. £1.00. 85950 421 2.

The flow of books for the Technical Education Council courses is suffering from drought. The intense competition must inevitably mean that sales of even the best series may not reach the heights they merit. It does appear, however, that prices are being held down, and some of the books are, in today's context, particularly good value.

Mr Stroud's contributions are a good example. The first volume, for electrical technician courses, is suitable for T.E.C. Level 1, has nearly 500 large pages, is extremely clearly set out and printed, and has many illustrations and good exercises. If there should be those who wonder why youngsters move

from eleven years of schooling to college of further education still need to be taught this sort of elementary material, any college lecturer can provide an explanation.

A fact of life is that even junior technician apprentices (who are, it is always assumed, among the better qualified of the sixteen years old school leavers) often find difficulty in coping with basic mathematics in college courses. Books of this nature should pave the way to higher things and, in the first instance, to T.E.C. Level 2.

Here Mr Stroud structures his work so that Book 2 (over 250 pages) equates to a half unit at this level, and is to be associated with a forthcoming Book 2A (largely with practical applications) or Book 2B (with an analytical approach, suitable for those proceeding to higher levels of mathematics). As in the introductory book there are pretests, a logical sequence of topics, worked examples, revision summaries, guided revision, and many exercises. Good value indeed.

Mr Horner's books are equally commendable. They derive from his two volumes of *Ordinary National Certificate Mathematics*, and these were generally accepted as among the best of the O.N.C. texts, being mathematically sound, of good academic standard and full of quality teaching techniques. The same judgment applies to "new" books. Indeed it must do, for although Mr Horner says in a preface to the first volume that the text has been organized and indexed so that lecturers and students should find this book and its companion... completely adequate

to deal with the mathematics within TEC Levels 2 and 3", it must be remarked that there are few significant differences between the O.N.C. text and the new setting. Fast have given way to metres and pounds force to newtons, in a change to SI, but generally page for page, line for line, the books are recognizably the same.

Sections on statistics, probability laws, distributions and centroids have, however, been added. Incidentally the same three new chapters dealing with these themes occupy the last pages in each of the two volumes under review, but their contents are represented in the index of the second volume only. The other index is a reproduction of that in the original O.N.C. work.

Let it be sufficiently stressed that Mr Horner's O.N.C. books ranked among the best, and if, as it is hoped, T.E.C. achievement matches that of the national certificate range, his books should continue to be popular.

The next title, for electrical technicians, carries on a course which is already finding favour. The treatment may not be very exciting or novel, but it is competent and adequate. It is not, however, quite so neatly presented. One possible way of keeping the price down is illustrated by the sets of exercises designed (very effectively) by Mr Smith to give practice in the different topics of the levels 1 and 2 units. The T.E.C. bank of objectives is matched closely and though the questions are generally straightforward, they do test the principles involved.

Modern and traditional

Andrew Rothery

Maths Takes Off. By Geoffrey Wroe. Teacher's Book £10. Pupil's Booklets £13.75 (5 copies of each).

Mathematics for Schools Level II. Second Edition. By Arnold Howell, John Walker and Harold Fletcher. Addison-Wesley Teacher's Resource Books. Books 1/2, £4.50. Books 3/4, £4.50. Children's Books 1/2, 3 and 4, £3.20 (10 copies of each).

These two sets of textbooks illustrate one of the major symptoms of the problems facing the teaching of mathematics in schools today. *Maths Takes Off* is intended for the least able 25 per cent of 11 to 14 year olds in the first three years of secondary school. Yet the material could be found quite easy for the average seven to 10 year olds. *Mathematics for Schools Level II* Books 1-4 are indeed aimed at seven to 10 year olds, yet some of their

material would be too hard for *Maths Takes Off* pupils. *Maths Takes Off* will help satisfy the demand for remedial materials in mathematics for younger pupils in secondary schools, an area neglected until recently. For such pupils, still struggling with the basics of telling the time, coping with money, number, elementary arithmetic and simple geometry, Geoffrey Wroe's course provides a collection of small booklets which covers these topics carefully at a steady pace. The pupils' books have clearly set out work with simple language. The content concentrates on maths skills rather than real-life contexts, but the structure allows teachers easily to incorporate the material into their own programme of applications or projects. The breaking of each topic into gradual stages within each booklet is handled very well indeed and should prove most effective. Remedial teachers are particularly recommended to inspect these books.

The second edition of *Mathematics in Schools* (often called *Fletcher Maths*) informally shows a welcome trend in the development of primary courses. So often when books meet criticism, demand falls, as new titles appear. Here the authors have listened to the comments made about the scheme over the last 10 years and the new edition shows they have made a serious attempt to improve the books. The basic philosophy remains the same, but the pages in the pupils' book are much less crowded, looking, with some changes in the four operations, time, money and fractions. The teacher's book is more streamlined with vocabulary suggestions for use with children and a glossary of technical terms. *Mathematics in Schools* has enjoyed tremendous success over the last ten years. When it was first published it was virtually the only "modern maths" scheme to provide pupils' books. Now of course there are more rivals on the market, providing courses combining "modern" and "traditional" mathematics. The second edition represents a move towards competing with these more effectively.

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First published in the late sixties and variously revised and reprinted over the last decade, the Collins-Longman graded series of atlases has now been subjected to further revision and updating. *Atlas One* for the seven to nine year olds and *Atlas Two* for those who are now twelve have both been improved and brought up to date. They retain their strong visual appeal and lead the growing child gently but firmly

forwards into the world of atlases. The associated workbooks have also been revised and relate both to the previous metric editions of the atlas series as well as to the revised version.

Atlas Three has had eight pages of statistics data added giving a potted analysis of the world, country by country. There is also additional material on the climate, resources and economy of Europe to increase its value for "environmental project and CSE studies".

Atlas Four for "secondary certificate levels" shows most change with sixteen additional maps and thirty new maps extending the coverage to China, Japan and South America. Throughout, Collins-Longman have taken care to monitor developments in teaching and to reflect these in their workbooks. All in all they have improved what is already an excellent series of atlases, producing them at prices which represent good value for money.

Cartographic Methods may best be described as a handbook for budding cartographers. It covers the methods whereby maps are produced, details of map symbols, and the use of map-making techniques for map making. It was published in 1971, it is long overdue a revision, and the new edition is a welcome addition to the series. It is a book which is useful to teachers and students alike. It is a book which is useful to teachers and students alike. It is a book which is useful to teachers and students alike.

[illegible]

extra

Contents

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"Why hasn't it worked?" continued

The materials produced have failed, it seems that they fell at the first hurdle—that of convincing teachers to take them seriously. A survey has shown that Science 5-13 has only been studied seriously in 30 per cent of schools and is being used by 22 per cent while the corresponding figures for Nuffield Junior Science are 20 per cent and 7 per cent respectively.

Primary teachers almost certainly lack confidence to take up the new philosophy. Marjorie Whittaker has pointed out (in the *School Science Review*, March 1980) that most primary teachers probably have a strong aversion to physical sciences, which they last experienced in secondary schools where the didactic and factual approach left them with no experience of the type of work now required. Open-ended activity in which a teacher has to encourage particular skills by careful guidance of the pupils' own interests requires some knowledge, or confidence to learn, about many topics and some first-hand experience of the skills involved. Most primary teachers have neither. When the schemes of work they are offered have a complex nature, offer a wealth of materials, but leave choice of the specific

activities, and decisions about level and pace to them, it may not be surprising if the challenge is refused.

While it is clear that active help for primary teachers is a first priority, it cannot be assumed that the only problem is to help them to use the ideas and materials that exist. These materials themselves raise several problems.

One such problem concerns the view that science is organized commonsense, arriving at its theories by intelligent induction. The traditional works within, and through a complex framework of concepts and it took the genius of Galileo and Newton, in defiance of the commonsense of generations, to establish such concepts for mechanics.

It is, of course, true that these abstract concepts are beyond the powers of young children and that to channel work towards them risks loss of enthusiasm and meaningless rote learning. But the problems illustrated by the mechanics example will not go away: research with children is now establishing in this area, as in many others, that they construct their own conceptual schemes to cope with the problems of understanding nature, and that these, like those of every scientist up to the sixteenth century, are a

real barrier to the scientific understanding. What then is to be made of the plea to encourage children to develop and rely on their own ideas? It is not now obvious, a priori, that the best route for developing understanding of science up to age 11 is to concentrate exclusively on the process skills of concept-free science.

Arguments for adjusting the policy about content in primary science were put forward recently by several authors, notably Professor Kerr, in the Spring number of *Education* 3-13. Norman Booth recalled another project of the sixties, the Oxford Primary Science Project. This offered a scheme which, although based on children's activities, wanted these planned to serve four broad themes—Energy, Structure, Change and Life. This too failed, and perhaps one reason was the gap between the grand concepts of primary science and the activities of which children were capable. Wynne Harlen, writing in the *School Science Review* in June, 1978, proposed a more modest list of content drawing on her experience in the Science 5-13 and Progress in Learning Science projects. Her article reviewed the arguments for and against some content aims, and concluded that while the process aims must come first, the children's activity had to be about something and it might as well be arranged to cover some common broad themes.

Others have argued that children ought to begin to have access to those ideas which have helped scientists to make sense of the natural world. It is also evident that if children's own interests have to be a prime source for activity, then some interests, such as space travel or nuclear energy, may need a degree of reliance on secondary evidence that is fully acceptable in other areas (such as history) for 10-year-olds.

If these various arguments have force, they would lead to a strategy in which children's interests and their needs for first hand experiences are still given first priority, but which also organizes problems and materials to channel interest and to ensure that some of the experiences provide a helpful challenge in a few particular concept areas.

Such a strategy would have an effect on another aspect which also needs reconsideration, that of providing materials for pupils and more direct guidance for teachers. The experience of the superb work which can be produced when children's own initiatives are guided by the best teachers has led many to the view that any planned provision will be an obstacle to excellence. However, without such provision, teachers can only be given vague advice, and the demands, for decision, anticipation and preparation, become too great.

The recently published series on Teaching Primary Science (produced by the College Curriculum Science Studies Project under John Bird) has tried to provide firmer guidance, giving advice and examples on providing work for children, and clearer background information for teachers with each of its themes, while also providing a short list of objectives to guide the activity, chosen from the schedule of Science 5-13.

Such designed activity can make the teaching task more manageable, partly because contrived experience raises problems which can more easily be guided to fruitful work than many that appear in the complex world of the natural environment. However, the strategy for choosing useful activities will have to take account of a further factor that has been largely ignored hitherto: the science of most successful primary work has been pure science. If it had been technology, their philosophy and emphasis might have been different and the work of mechanical and electrical construction might have invaded the classroom.

Many and strenuous efforts are now being made to support and promote primary science. But those tending the feeble plant face the dilemma: does it need just light and water, does it need artificial fertilizer, or should we let it up again and have another look at its roots?

Professor P. J. Black, Director of the Centre for Science and Mathematics Education, Queens College, and Educational Consultant to the Nuffield Chelsea Curriculum Trust.



Photo: Joanne Paul
It can be done... Six-year-olds at Honeywell Primary School, London, are experimenting with circuits and (on the previous page) learning about the winds with a home-made windsock.

GETTING ON COURSE

Howard Bradley identifies three different groups of teachers and suggests how INSET may best meet the needs of Primary Science.

The first requisite for effective in-service training is to have an accurate picture of the teachers you are trying to help and it is clear that the early model of teachers as a more or less homogeneous group, not very aware of science in the classroom but eager to give it a go, was wildly simplistic.

In a survey of 600 teachers in the East Midlands in 1975, I found a large group of teachers who felt they knew nothing about science and did little or none with their pupils, but they did not seek science courses. There were significant differences in commitment between teachers with some science training and those without, and between men and women. If the majority of primary school teachers are women and untrained in science, what effect is this having on pupils? Is there a connection between these findings and the problem of persuading sufficient pupils later in their lives to take up scientific or technological careers? As far as INSET is concerned, we must modify our earlier model to accommodate thousands like Mrs Doubtful.

Mrs Doubtful specialised in art at college and her classroom is a spectacular demonstration of her success with children in that field. She already runs local INSET courses on art. She has never been attracted by science and is a bit fearful of anything mechanical because it usually goes wrong in her hands. If she tried to teach science, she fears she wouldn't enjoy it. Mrs Doubtful enjoys, with us all, that very human characteristic of choosing to do those things in which she has already experienced some success, so she actively seeks out service training in art and reads deeply into art education, but shuns both courses and reading in science.

Mr Keen, who teaches in the same school, is quite different. An enthusiastic model interests and has attended many courses on primary science. He runs design competitions in which his pupils have to invent and build machines to perform a specified task. With Mr Keen the problem is only how best to support him and how to make best use of his enthusiasm, energy and skills.

It so happens in this school that children at the end of their year in Mr Keen's class pass into that of Mrs Doubtful. The skills he has been nurturing are suddenly neglected and the children's enthusiasm

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extra

"Getting on course"
continued from page 36

Inappropriate for Mr Keen. INSET more appropriate for each is needed.

The position of the head teacher with regard to curriculum planning is vital. Since heads are just as likely to be deterred by science courses as teachers, it is probably better not to run courses for heads on the place of science in the curriculum but instead to ensure that the example of science is studied in general management courses which attract all heads. There is a good case for producing some sample study units and case studies for use on such courses, and perhaps later by heads with their own staffs.

We have an inadequate supply of people like Mr Keen and are unlikely to get enough from initial training over the next few years, so INSET must fill the gap. A substantial course seems essential, mixing work in the teacher's own school with group working sessions.

A course of 80 to 100 hours spread over two or three terms would be about right. At the end of the course teachers should be able to introduce young children to scientific knowledge and skills including problem solving and invention.

He must have sufficient knowledge of science, and particularly physical science, to enable him to act as a consultant to other staff. At the same time he must not simply be a crusader for science. His course should prepare him to appreciate the head's overall curriculum planning problems so that he can make constructive suggestions from the same viewpoint.

What of Mrs Doubtful? I have argued for a plan subscribed to by all the staff in the school. Its development is the classic case for school-based INSET for the whole staff and probably the only way of getting Mrs Doubtful involved. The plan should be made on a small scale, developing just a few topics, spread across the years, planned perhaps to ensure that children do encounter a small number of basic science concepts and skills. Non-

scientific members of staff will need support materials to help them, and briefing sessions will also be necessary.

Mr Keen's knowledge here is valuable and schools may have to seek help from another school or adviser or a training institution if they don't have his expertise. Even on a small scale, such an effort needs time and teachers may need to be released from teaching occasionally to do some of the work.

The lessons for us from this analysis are that different courses of INSET in primary science must be designed to meet the needs of different groups of teachers, which I have identified three—heads, specialists and non-specialists. Each of the parts is only meaningful in harness with the other two. Together they form a coherent strategy by which schools can improve the opportunities for all children, not just the lucky few, to enjoy work in science.

Howard Bradley is Director of the Cambridge Institute of Education.

A STRATEGY FOR A POLICY

By Roy Richards, director of the Schools Council Learning Through Science Project

A lot has been said about the parlous state of science in our primary schools. Her Majesty's Inspectors in their survey *Primary Education in England* ("I tell you that 'only a minority (of head teachers) recognized the important contribution that science could make to children's intellectual development'"; that "there was a lack of appropriate equipment" and that even though only about a fifth of all classes used printed aids to initiate work in science they felt "the discriminating use of carefully chosen text-books or assignment cards can help to sustain work in science if their use is carefully planned to supplement a programme of work". Here are the problems as the DES sees them—why are they so, and what can be done about them?

To answer a question with a question, "Why should so many head teachers be ignorant of the benefits which science can bring to children's intellectual development?" Surely the answer must lie in their own education and the images they have of science—one of white-coated laboratory workers and bunsen burners. Where has science education gone wrong that it turns out people with this lack of understanding?

Certainly this extract from student choices in science makes some indication of the kind of science we pursue in our secondary schools. The main areas of difficulty appeared to be technical terminology, symbolism and mathematical content. The inability of young students to come to terms with these factors in the attitude-formative years before the age of 14 is a major alienating force. Also the sciences are seen as being too factual and impersonal, too examination orientated and with syllabuses crowded with too much boring, irrelevant materials. It would seem that the conceptual complexities frequently do not match the intellectual maturity of pupils.

What, then, is so pertinent about science education in primary schools, when it is practised well, that distinguishes it and sets it apart? Perhaps it is the teacher who, through guidance, stimulates children's curiosity, making them aware of how their own five senses to actively explore the world. Inevitably, such exploration will give rise to questions which are usually of little interest to the children. Those of a scientific nature can be answered by direct inquiry and testing. Very often the data collected yields patterns and relationships. The information found and method of inquiry used may need to be communicated to others through talk, writing, models, tape-recording, paintings, charts, graphs and so on.

Such methods of inquiry, let us call them processes, are not a late and sophisticated development of the human mind, but are a part of the persons of every child. They are the means that he or she uses every day to find out about the world. As such they are to be encouraged and developed; for by doing so we enable children to work in an area of knowledge that has methods of working and concepts peculiar and particular to it.

Much is made of the fact that many primary school teachers do not have a good working scientific knowledge. It is clear that the more one can know, the better. This still belies the truth that we, all as teachers, have many more experiences of the world than the children we teach. Certainly we have a better grasp of the processes of science than they. We can help our children indulge in these processes and help them to use the many texts that will provide any background information needed.

Therefore, it seems the first task is to convince head teachers of the necessity for doing science and to give them some practical help in the implementation of the scientific part of the school curriculum. To do this the Schools Council Learning Through Science Project has produced a text describing a strategy whereby any primary or middle school staff can determine its own school science policy.

The text has been written in the light of comments from some 50 regional groups of teachers, and it describes and discusses what is meant by science, why one wants to do it with children and what experiences can be put before children. It also takes up the question of different patterns of organization and looks at evaluation and record keeping. The regional groups advised that the text be kept brief and concise and the strategy be clearly laid out for school staffs to discuss. Additionally, it contains an index to all the books in the Science 5/13 series.

A school science policy presents a good start. The problem then arises of the kind of resources needed to implement the policy, for as the HMIs said, "There was a lack of appropriate equipment". What sort of things do young children need? Well, it is a tale of many things: of shoes and ships—and sealing wax—perhaps even "of cabbages and kings".

There will be those things needed that arouse and maintain children's curiosity. Anything from building blocks, and odd and soiled to rocks, fossils, bones, clockwork and mechanical toys, batteries, bulbs, wire, wheels, bottles—the list can be legend.

Then there are those things that help children to gather data and specimens as they explore around the school. This is a list of clipboards, pencils, paper, plastic bags, specimen boxes, hand lenses, and perhaps plastic spoons for picking up small creatures such as woodlice. Living things will need cages so that they can be properly looked after. Means will have to be found and devised for displaying and storing the non-living materials.

Equipment such as measuring sticks, stop watches, thermometers, balances, strength testing devices and so on will all be necessary to help children develop inquiry skills.

There may be a good case for making collections of materials for interdisciplinary studies. For example, "Homes and Houses" is a common topic and there would be good reason to have a box containing a variety of floor coverings and another box with a variety of fabrics. In both instances these boxes would yield useful material for practical investigation.

Much more can be said about resources for the school. For example, the school grounds can be a useful resource for scientific investigation. If there are plants in the school grounds, a weather station, bird tables and a pond, course resources need to be organized and used and this is an important aspect for staff discussion and implementation. Again, all these aspects have been considered in "Learning Through Science Project" and are to be the basis of text on resources and their use for future publication.

One important additional resource that many teachers have asked for is that of written pupil material. The DES report says that "assignment cards can help to sustain work in science". It is probably true to say that much of the commercial material in this field is highly prescriptive and does not encourage children to develop their own ideas of science that we have been talking about.

Essentially, there must be an active involvement of children, not only with one another but with the teacher, for surely, it is the teacher who guides and encourages who guides and encourages. Assignment cards, work cards—these what you will—are only aids to be of lasting benefit if they encourage children to question and think out ways to answer inquiries. They must be as written as a development of an inquiring mind and a scientific approach to problem solving.

This is no easy task and the Learning Through Science team have been writing assignment cards that attempt a balance between guidance and open-endedness and above all allow children to develop intellectually through inquiry. In the processes of science, the units so far trialled have been "Colour and Coloured Things", "Ourselves" and "Using the Environment". These are the first three in the series and it is hoped to cover those content areas by children in primary schools.

All this seems a positive way forward; however, our materials are but a resource. Activity when it comes to Monday morning in the classroom, the person to help the children is the teacher who knows them and their colleagues in the school. The thought out a strategy for implementing science, has gathered the resources needed and has thought out how best to adapt them to his or her children then we shall progress. This can be done; let us all see that it is done.

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Educational.

Watered down secondary school terms will not do in a world where science must fit the child and not vice versa

A UNIQUE SPIRIT

By Peter Dixon

What is happening at your local teachers' centre this term. My guess is that there will be a course about primary science and that it will be very well attended.

Most primary teachers are noted for their eagerness to attend courses and the primary survey's criticism of science in their schools has initiated the mounting of numerous primary science courses.

What sort of courses will these teachers be attending, and will they be worthwhile? I am fearful that many teachers' willingness to attend courses and implement the recommendations of the primary survey can sometimes be exploited.

An example seems to be "science". As we all know this subject was severely criticized in the survey—and it is good to see so many teachers seeking to improve their teaching in the area. From my observations, however, there seems to be one major flaw concerning some of the courses they attend.

It has to do with the uniqueness of our primary schools. The ideal of Plowden were rarely fully put into action, and in spite of the current concern with a core curriculum, and a return to formal methods, the primary classroom is an establishment with a spirit and approach to learning unseen elsewhere. It is a world where the child's needs are central, and subject divisions, slavish (insensitive) obedience to bells, and over-riding obedience to syllabus and examination requirements are almost unknown.

It is in the primary schools that we find children learning because they want to, rather than because they have to. It is in the primary schools that children realize that education is concerned with a great deal more than learning facts and rules, and that people learn best

when they are actively engaged in pursuing something of personal interest. It is also in the primary schools, with their completely flexible days, that opportunities arise to learn science (or other subjects) to interest individual stages of development.

The flaw referred to earlier is concerned with the fact that primary school teachers tend to underestimate their own vital contribution to education, and succumb to the views of a subject specialist who often has little or no understanding of the primary school. In some instances such specialists might know what happens in primary schools—but it is very unlikely that they will enjoy any real "feel" for it.

In numerous instances, therefore, we find courses for primary teachers being led by subject specialists, who speak in watered down secondary school terms... and at the present time it is particularly evident in the science area. Admittedly there were faults in the approach to science in primary schools, and it needs to be a great deal more than nature walks and haphazard encounters with passing interests, but the answer is not to start teaching science in selected periods of time according to a syllabus, as to do this is to begin destroying the initial spirit of the primary school.

At the primary conference (Nottingham University, April, 1979), John Tomlinson, HMI, spoke of his concern regarding the interpretation accorded to the need to develop better science in the earlier years of education. He put his point succinctly: "The (new) teaching of science must not be predatory upon the Primary Spirit".

The shame is, however, that science does seem to be becoming

a predator, for already we are seeing instances where primary teachers are encouraged to "do experiments", list aims, methods, apparatus and eventually to write it up in the true spirit of the secondary science lesson. Already I am seeing primary teachers struggling in the corners of overcrowded classrooms to ape the sort of experiments being done in secondary schools.

At a fairly recent course (attended by about 100 teachers after school) the suggestion was put forward that "science" really ought to be timetabled as a specific period of study... well, it depends what we want from our children in the early years. If we want a course of study designed to fit them easily into the secondary syllabus, then let us do just that. By the same token we will also have to introduce a programme of work in other aspects of the primary day similarly geared to the secondary school's approach to education... and as soon as we do that we turn education back to pre-Plowden days.

My plea to primary teachers attending science courses this term is "Be brave!"

Do not sit and absorb advice from a speaker whose expertise is "science" rather than primary education, for they can't be divorced. You belong to a world where the child and his needs are central. Yours is a world where science must fit the child and not vice versa!

I hope you will question the educational validity of 10-year-olds slogging through worksheets which are alien to their interests and concerns. I hope you will point out the foolishness of trying to introduce imitative secondary science courses and syllabuses into the progressive atmosphere of most primary classes. I hope you will have the courage to point out that there is an energy for learning, an enthusiasm for "lessons" in the earlier years which largely evaporates in the secondary years.

Of course, this change will be associated with adolescence—and the need to "get down to real things"—but any primary teacher worth his or her salt should be able to counter such suggestions by listening to their own children.



There is an enthusiasm for "lessons" in the earlier years which tends to evaporate later.

Photo: Joanna Blegden

appreciate the need for children to evolve scientific notions, formulate hypothesis, experiment, look and record, but this can be accomplished in a direct and purposeful manner without in any way interfering with the rich ethos of good primary education.

Sadly enough, the lamp of Plowden has dimmed... but it can never be extinguished. Our primary schools are unique, and while being prepared to implement advice we must also maintain the richness of a child-centred education and well established spirit of primary education.

Herbert Read once wrote a book called *Education through Art*. Surely it is time those who see themselves as responsible for promoting better science in our schools, read the book and endeavoured to see science as part of education, rather than merely an imposed discipline which is good for people in the age of technology.

Peter Dixon is a lecturer in education at King Alfred's College, Winchester.

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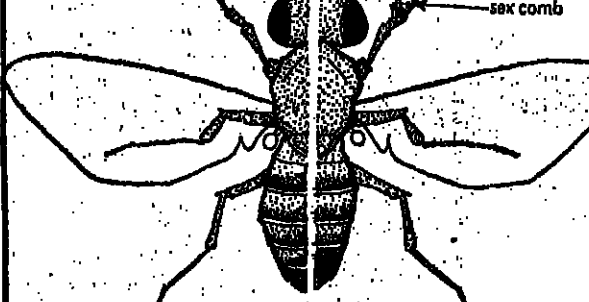
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Its value in terms of putting across the quite abstract concept involved in energy transfers is enormous. The range includes electric motors/generators, flywheels, various drive units, energy storage units, switch and lamp units. Each is mounted on a sturdy plastic base in such a way that all units can be interconnected with a minimum of fuss by drive belts or 4mm plugs and sockets.

The illustration shows a typical combination of units where mechanical, electrical and light energy transfers are apparent. The electric motor driving a flywheel can be switched so that it acts as a generator driven by the flywheel.

Many more examples of equipment suitable for use in energy courses are seen in the latest edition of the Griffin catalogue. Take a look through the items that will make your teaching much, much easier.

For full details see the Griffin 1980 catalogue pages 538-540.

We all know just how important it is to clearly get across the relationship between mechanical, heat and electrical energy — a vital link in anybody's course.

Have you seen the 'U' APPARATUS XHT-310-N? More to the point have you used one? Designed to put across the essentials of this difficult concept in a straightforward practical way and once again reducing the mathematical computation to a minimum.

Move on to the more accurate method with the XHT-410-F SPECIFIC HEAT CAPACITY OF SOLIDS APPARATUS — amazing results for the price and still the world over. See the Griffin 1980 Catalogue, page 535, for full details.

Demonstrating energy effects and transfers is much easier than making energy measurements — you always lose a bit!

Nowadays for teaching purposes we offer the Griffin DIGITAL JOULE AND WATTMETER XHM-841.

With this, measuring electrical energy is so simple; however did we manage without it. Every school should have at least one.

The meter operates from a mains supply, is directly connected into a.c. or d.c. circuits to count and display energy consumed over a range of 10⁻¹ to 10¹ joules.

This Joulemeter even has an output for an external meter which will display



the power consumption in watts. A further output is provided to drive the large demonstration display on the Griffin Digital Timer Scaler and Frequency meter XKS-370. This is an ideal combination for lecture theatres.

The difficulties found in manipulating equations and accommodating supply fluctuations over a period of time are eliminated using this meter.

One of the most startling demonstrations is to place the Joulemeter first in an a.c. series circuit to measure the energy consumption of a resistor. Not only can you hear the display

clicking away as energy is dissipated in the resistor but you can record the energy consumed after a set period of time.

If the resistor is then replaced by a capacitor, you are then dealing with a circuit which has reactance only. The Joulemeter is silent as the display is stationary. No energy is dissipated in the system as you have a circuit using 'wattless current'. The 'standing demonstration is only possible with a Griffin Digital Joule and meter.

Many more examples of equipment suitable for use in energy courses are seen in the latest edition of the Griffin catalogue. Take a look through the items that will make your teaching much, much easier.		
XBV-302-E seq	Dynamometers, newton range	page 431
YTP-540-K	Arm Ergometer	page 925
YTP-280-U	Bicycle Ergometer	page 924
XHV-301-R	Motor/Generator Unit	page 538
XHV-361-V	Switch Unit	page 538
XHV-391-A	Lamp Unit	page 538
XHV-421-S	Flywheel Unit	page 539
XHT-310-N	'U' Apparatus	page 535
XHT-410-F	Specific Heat Capacity of Solids Apparatus	page 535
XHM-841-01N	Digital Joule and Wattmeter, 240V 50-60Hz	page 531
XKS-370-01X	Display Digital Timer Scaler	page 643
XHE-700-A	Griffin Solar Panel	page 710

Biosystem

Physiology and biochemistry experiments require such a wide variety of small pieces of equipment that setting up a practical lesson for thirty students can be a nightmare.

With the Griffin Biosystem kit you can forget about these problems.

Each set contains all the equipment you're likely to need for simple and advanced biology experiments, e.g. a respirometer, potometer or porometer. All the pieces are standardised so you don't have the problem of joining odd pieces of glassware with bits of rubber tubing which never quite seem to fit properly.

The kit is easy to assemble and many experiments previously confined to demonstrations, because expensive equipment was used, are now available to your pupils.

The kit comes in a strong plastic tray with compartments which make the contents easy to choose, and to check at the end of the lesson.

All you have to do at the end of the lesson is to hand over the saving you valuable teaching time. Also as the kits are so small students to use less time in setting up apparatus and more on learning.

A booklet is supplied which gives 15 basic experiments with suggestions for further work.

YUH-130-D Biosystem kit

Thank you

Around Easter time we ran a questionnaire to some of our customers by post or via our representatives.

We are very pleased with the number of replies we received from the information gained and improve even further our range and the service offered.

Please accept our thanks for co-operation.

The Nanocomputer

Designed especially for educational use the Nanocomputer provides an excellent basis for students to learn how to use microprocessors.

It is possible to start at the simplest level with no previous knowledge of microprocessors. The system covers machine code programming and interfacing with external circuitry. It is sufficiently versatile to allow complete microprocessor based systems to be built up and even includes an experimental breadboard for assembling external circuits.

The whole package adds up to the MOST COST-EFFECTIVE MICRO-PROCESSOR TRAINING SYSTEM AVAILABLE for teaching.

You must see one. Send for a leaflet and ask for a demonstration.

Pick a Pack of Power

Choose a power pack from the Griffin range and you get more than power.

All units have rugged steel cases and uncomplicated controls to make them easy for your students to use. Some incorporate features such as adjustable voltage control and automatic overload protection to prevent misuse.

A hidden feature is that they all comply with the latest electrical safety standards so you can give them to your students with complete confidence. Cables and connectors can be detached for ease of storage and also to prevent misuse.

For full specifications of the Griffin range of power packs see pages 575-578 in Griffin Catalogue 80/82 or tick the box on the literature check list.

Eldoncards — a Griffin Exclusive

Eldoncards, the popular blood-grouping system, are now available exclusively from our Gerrard Biological Centre, in packs of 10 or 100. The Eldoncard test is easy to perform and provides a permanent record. The same cards which carry freeze dried antisera are used for clinical tests to give fast analysis of blood groups.

Place one drop of tap water on each panel of the card and mix with blood samples to provide a clear indication of ABO and Rh grouping. The card can then be photocopied or preserved with full annotation.

Each pack contains cards, a standard pipette, mixing rods and detailed instructions.

ZXC-124-050A Eldoncards, Pk of 10 £5.47

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GRIFFIN OVEN

A high quality oven at a very attractive price

now only £90

OVS-201-010P Griffin Oven

See page 227 Griffin Catalogue 80/82

A Major Breakthrough in Weighing

The majority of science teachers who use balances would agree that Mettler make 'probably the best quality balances in the world. "We would like to buy them but they're too expensive."

Well, the impossible has been achieved — the same Mettler quality and reliability at new low, low prices.

How is this possible? The answer is dramatic technological advances in the techniques for making the electronic circuitry used in the balances.

They are not cheaper versions of the real thing, the specifications are exactly the same as detailed on pages 31 and 32 in the Griffin Catalogue 80/82, but the prices are much lower.

Three models are available:

BDF-384-U Mettler balance, 400g x 0.01g £675.00

BDF-402-L Mettler balance, 4000g x 0.1g £700.00

BDF-406-N Mettler balance, 4000g x 0.1g £860.00

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To be absolutely sure, tick the box on the literature check list or ask your local representative for a demonstration.

Sound Level Economy

When measuring noise levels in the environment, it is often useful to be able to take measurements from different directions at the same time and compare the results. Also if you have only one meter per class it takes a long time for everyone to have a go at taking readings.

Therefore we set out to develop a low cost instrument so that teachers could afford to buy more than one. The result is the new Griffin Sound Level Indicator.

It is a low cost meter with an ingenious display system which is very simple to use.

A dial, calibrated to 110 decibels, is turned until an indicator light is just extinguished. The dial then gives a direct reading of sound level in decibels.

The case is very compact, handy size and constructed to withstand outdoor use. The meter is ideal for monitoring traffic noise levels and other aspects of noise pollution and is also sensitive enough for experiments on sound levels (eg effects of sound-proofing materials) in the laboratory.

The instrument is powered by two PP3 batteries.

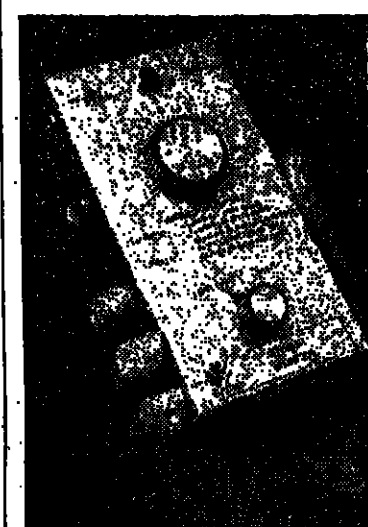
XER-400-T Griffin Sound Level Indicator £33.99

Dental Health Teaching Pack

Teaching about teeth is an important part of biology and health education in schools. In junior classes it is necessary to encourage care of teeth and provide instruction in dental health. Later on it is the physiology of teeth, their structure and function, which is more important.

To help teachers get their message across and provide information in an easily digested form we have put together the Dental Health Teaching Pack. Projection slides, charts and samples of teeth are included. Teaching notes which avoid the use of complex medical terms are supplied.

ZYD-300-P Dental Health Teaching Pack £16.52



Portable pH

Measurement of pH is usually restricted to older pupils and demonstrations only for the lower years. In many schools water samples in the field have to be brought back to the lab to take the pH instead of measuring it at the time.

The new Griffin Student pH Meter can change all that.

It is inexpensive, extremely robust, and simple to operate making it very easy for younger children to use. Instructions are printed on the case. Also being hand sized and battery operated it is ideal for field work.

The secret lies in the clever new design. Instead of a bulky, vulnerable meter to indicate pH, a light emitting diode (LED) lights up when the dial is turned to the pH of the solution the electrode is dipped into. What could be simpler? It uses the standard combination electrode which is supplied with the meter and covers the full 0-14pH scale, accurate to ±0.2pH.

PHJ-200-R Griffin Student pH Meter £51.50

Why not order one straight away or if you need further convincing, tick the box on the literature check list and send for the leaflet.



Get it right first TIMER

In fact a millisecond timer. Designed for use initially in physics for timing work but there's nothing to stop you using it in the biology department for reaction timing experiments and the like. It is even useful in the PE dept for physiological tests and short time runs.

The timing range is from 0 to 99.999 seconds on a large easy to see 5 digit display (of light emitting diodes).

Results are possible to ±1 millisecond. A 'hold' switch 'freezes' the display at any time during an event and whilst the reading is taken and recorded the unit continues timing. The display 'catches up' when the hold is released.

The timer can be triggered by mechanical or photoelectric switches with various make/break combinations to suit experimental circumstances.

It is lightweight, fully portable in one hand and has instructions for use printed on top of the case. You can't lose it.

TML-900-V Griffin Millisecond Timer £107.00

If you want further details tick the box on the literature check list and send it to us.

Minorscopes

Actually microscopes for minors. It seems they are just what many people have been looking for. Reasonable quality microscopes at real low prices for lower school and junior work.

Everybody can get their hands on one and everybody can learn how to use them and what to use them for.

Children should start with a junior stereomicroscope looking at all sorts of things regularly. Recognising things as they really are in a way that youngsters can really understand — that is in 3 dimensions.



This microscope is lightweight and can be used outside — in the field. The adjustable eyepieces (to fit everybody's eyes) are locked in with grub screws — so you can turn it upside down if you want to. Objectives are fixed and overall magnification is X20 — quite adequate for looking at most objects and big enough for recognition, understanding and interest. The base has an opaque glass plate to accommodate specimens and two stage clips for holding them.

A fixed focus stop is there to avoid over-winding the rack and pinion adjustment and rubber feet are fitted to protect bench tops.

Once they have got the know-how it's a small step for pupils to learn how to use one eye and handle a monocular microscope.

The Griffin Minor Microscope for basic work has magnifications of x40, x100, x200 with fixed eyepiece which cannot fall out or be removed.

A fixed focus stop again protects both the objectives and the slides being viewed. A simple condenser lens is permanently fixed to the stage so no adjustment is needed here — less to fiddle with, but improves results.

The stand inclines through 90° for an easy viewing position and the base has rubber feet so that it does not slip around.

Both good lookers, both good value for money.

MNC-300-D Griffin Junior Stereomicroscope £33.99

MIS-300-N Griffin Minor Microscope £24.72

Disinfecting Cloths, Pack of 20 £5.95

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Remind your pupils of hazards in the school laboratory. You can't do it often enough!

A new series of easy on the eye posters, 580 x 410mm, with a real SAFETY message. A set of 5 at a SPECIAL OFFER PRICE OF £3.00 when ordered with this coupon.

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Griffin News



Introducing The New Low Price Demonstration Meter

Why pay £100+ for a demonstration meter when you can buy one for £39.99?

The Griffin 20-0-100A demonstration meter is completely compatible with our existing range of shunts and multipliers, EHA-870 and 890 series. This extends the working range of the meter without having to buy a new set of shunts and multipliers. The large black markings on a white background ensure that results are easily read from a distance, as does the stand which inclines the scale.

The compact style of the meter allows it to be easily and quickly moved around; scale changing is rapid and doesn't involve any of the fuss associated with slide-in scale instruments.

It also has a zero adjustment and full diode protection up to 12V. Connections are made via 4mm socket terminals.

EHB-850-Y Demonstration meter £39.14

New Disinfecting Cloths: As Shown on 'Tomorrow's World'

These new cloths will kill most vegetative bacteria and fungi on contact. All you have to do is wet the cloth with cold water before use then wipe the contaminated surface. The disinfectant is impregnated in the cloth and the germs are killed instantly. For added safety with re-use an indicator strip shows when the disinfectant in the cloth is exhausted.

They are ideal for laboratory benches and transfer chambers before and after microbiology work. Also useful for cleaning animal cages, in domestic science rooms, wash basins — anywhere where germs hide.

ZXC-124-050A Disinfecting Cloths, Pack of 20 £5.95



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If you would like copies of any of these product information leaflets just tick the box and send the coupon to:

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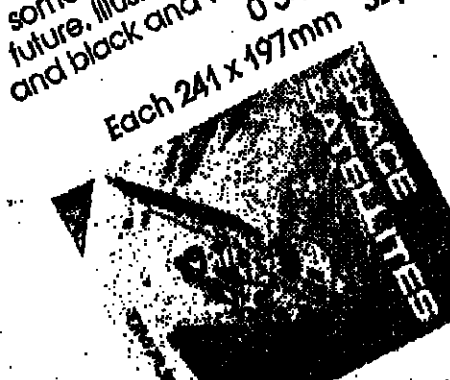
A series of large format, highly illustrated publications to subjects which have proved to be of considerable interest to children.

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SPACE SATELLITES Tim Furniss

How satellites are put into orbit, the types of orbit, how they are powered, what they have achieved so far, and some of the things they can be expected to do in the future. Illustrated chiefly with photographs in both colour and black and white.



Each 241 x 497mm 32pp 40c £2.95 net

Survival in the Wild

Each species of wild animal or plant, beset by a unique series of problems, has evolved its own array of strategies to enable it to survive. The living world, therefore, displays an almost bewildering diversity of these strategies, which this new series aims to describe and explain.

Animals interact in a variety of ways, and each individual may be a predator, or prey, or a potential mate: only the successful survive to reproduce. Each life in the series takes a biological function vital to such survival and describes the physical and behavioural adaptations which have evolved as a result of the fierce competition for survival in the wild. To be published in October

Feeding Strategy

Jennifer Owen
Illustrated £6.95

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Tim Halliday
Illustrated £6.95

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Denis Owen
Illustrated £6.95

Oxford University Press

extra FLEXIBLE SUPPORT

Nuffield Combined Science Themes for the Middle years were designed specifically for primary science writes Clifford Bingham

The materials produced by the teams of teachers selected to write themes for this project were the direct result of a demand from schools where science was being considered for the eight to 13-year-old pupils. Many middle schools were using the original Combined Science materials for their 11 to 13-year-old groups but the need was felt for materials for much younger and far less able pupils.

Primary school teachers were stimulated by the publications of the Schools Council Science 5/13 project. There was general agreement that any primary school science should give pupils the opportunity to become familiar with a wide range of living organisms, substances and phenomena. This experience ought to arise in an unstructured and informal learning situation. The natural excitement and curiosity of a child should be given full scope in investigating the immediate environment. To this end it was thought best to present the material as a series of themes.

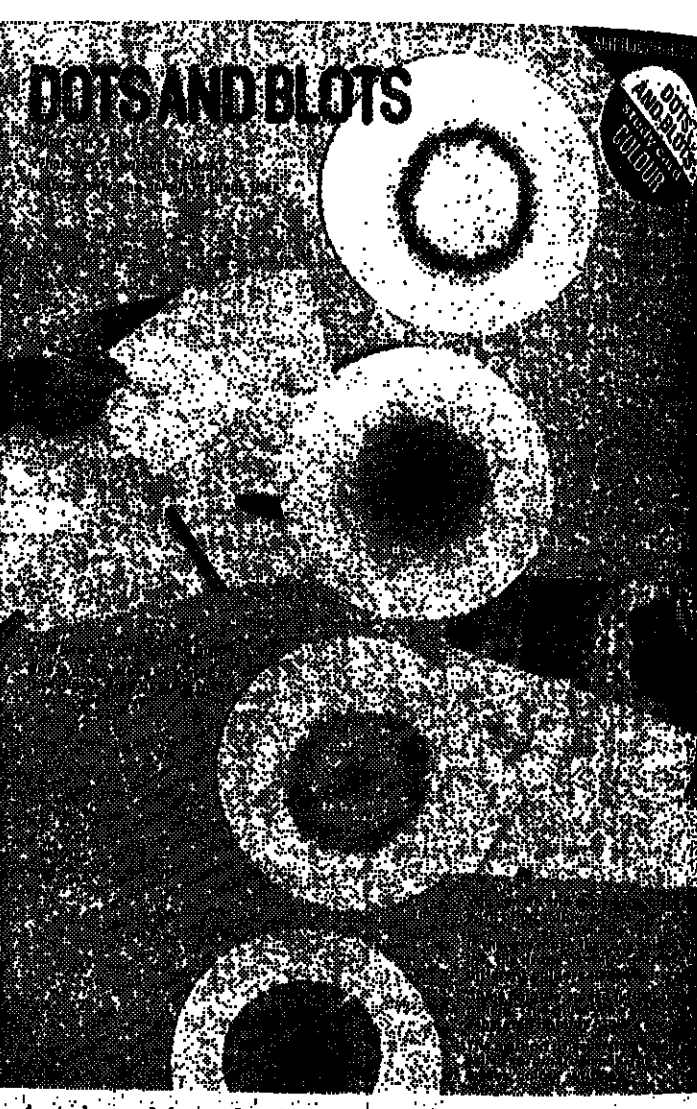
Each theme is based on four main areas of study. This area of work has its study card, an A4 card printed in full colour on one side and black and white on the other. The illustrations from colour slides or artwork and the design of the layout combine to make an immediate appeal to children. The high quality of card and durable finish make them long lasting. The material and illustrations of every study card should remind the user of some things with which he is already familiar, add to existing experience and stimulate inquiry into new areas of the subject. Many of the questions posed are best answered by carrying out simple investigations. The instructions for carrying out practical work are fully outlined on the study cards. An area of work covered by a study card may be further explored by associated work in the form of a booklet, labelled A, B, C and D are built into the work to be set out as a linear progression, print lines are short enough to be easily read and stages in the investigation can be illustrated as sequential diagrams. A bold type face sans-serif in 14 point print with good spacing between words and lines of print is found to be easily read by those who normally have reading difficulties.

It was realised at the outset that provision for science teaching in primary schools and in 8-12 middle schools was not necessarily on a specialist basis. The best that could be hoped for was access to a year group practical area or a portion of a room set aside for science work. Staff would also need as much help as possible. Teaching notes, written for each theme give this help. They give answers to all questions posed on study cards and activity cards. To enable further work on elaboration of the work of a theme there is complete referencing to the Schools Council Science 5/13 and to the Teachers' Guides of Nuffield Combined Science.

Many helpful suggestions are made on sources of material and on improvising apparatus from common place objects as discarded glass, metal or plastic containers, household objects like conch shells, kites, bowls. The importance of consolidating experience by reading has led to the inclusion of lists of suitable books to go with each theme. Children are encouraged by the activity cards to consult books on the subject of the theme in the classroom or school library.

A few examples of experiences during the trials of the materials will serve to show some of the uses.

One school in a heavily industrialised area, asked to tackle the theme "Sorting", reported difficulties in finding footprints in order to make plaster casts to simulate fossil production. Their final solution was to prepare an area of wet clay in which the local rugby team made imprints of their feet, with and without boots. Plaster casts of the feet of local heroes produced an impressive exhibition. The same study card "Once upon a time, a fabled" suggested a fossil search in road metal or on a beach. A



A study card from the theme on "Colour".

parent who had recently found fossils in the coal seam he was working turned up at school with about 50 kilos of assorted coal measure fossils.

It was this miner's first visit to school since he left but he joined in the excitement of the science class for the whole afternoon. Another school with a large proportion of first generation immigrant children used the cards as reading matter to teach some English. They found that the simple language relating to visual material on the cards and to activities going on in the classroom gave a more realistic approach to reading than the more complex books with suitably simple words. In the case of a few cards, two on "Estimating and Measuring" and one on "Senses", is made of a cartoon approach. This lighthearted treatment of otherwise rather difficult areas of work, "Mass, Temperature and Hearing", while causing some doubt in the minds of teachers, proved stimulating to younger children. The comments from a rather tough city school encouraged us to produce at least some of the study cards in this form.

Perhaps at this stage it would be well to describe one theme in detail and indicate the use already made of the component parts. The theme "Movement" falls naturally into the areas "Movement on Land, Movement in Water, Movement in Air and Movement in Space". Study cards with their movement in each type of environment also illustrate a wide range of machines incorporated into cars, tractors and aircraft. Some schools have used this theme as a scientific investigation of movement.

Others have used the cards and activities of the theme as part of an integrated study of transport, sport, conquest of the air, shipping, farming, local authority services, a study of water and the development of the city. One particular school used the study cards on lines, sails and rudders as preliminary work in the classroom before embarking on a sail training course and found that the simple use of models with a small fan to provide the breeze, of sailing across the wind, the wind, turning about and following the effect of the "set" of the sail, the sudden and the capture board could be clearly demonstrated.

ASSESSMENT: WHAT'S HAPPENING TO THE CHILDREN

By Wynne Harlen

Why assess young children's progress in science? It is important to assess progress in science. One of the most important is to help in learning, to find out "where the children are", what ideas and skills they already have so that new experience can be provided which will effectively on the existing knowledge. Another can be to help in the development of a class as a whole and perhaps how the class average compares with other children of the same age group.

This need not be done in a competitive spirit but, if sensitive to the current constraints and support which operate in different schools, it can help teachers in planning experiences to build upon strengths and counter weaknesses. A further reason for assessment may be to provide a picture of children's performance on a nationwide scale, so that everyone, not just the children's teachers, can know what children can and cannot do.

These three purposes are examples only from a much greater range of possibilities, which can be seen as varying in the degree of "closeness" to children in terms of effect on their everyday work. Assessment as part of teaching is very close in this respect, for its purpose is to inform day-to-day decisions about activities. At the other extreme is the assessment for the purpose of monitoring, as being carried out by the Assessment of Performance Unit, which is remote from children in respect of immediate effect on their work; its effect may be to influence the national picture and policy decisions following from these and from teachers' responses, to whatever state of affairs is revealed.

The differences in regard to close, intermediate and remote purposes have implications for the kinds of information required to serve the various purposes. The closer the assessment is going to affect individual children the more it has to be concerned with the whole range of attitudes, skills and attitudes which are goals of science activities. It has to be diagnostic in character, to tell not only what a child can do and what difficulties he is encountering, but also what might be the causes of difficulty, what kind of help is required. The methods of assessment must be capable of giving the very detailed information about individuals which is needed when the purpose is to help individual children. In the case of remote assessment, the details of individual children would be lost, and the emphasis in selecting methods is upon being able to obtain reliable information about the numbers of children.

The following is an attempt to set out, briefly, at ways of assessing children's scientific development which are appropriate to the different purposes contrasted in "closeness" to children's learning activities. First, there is the assessment for helping children's learning activities; secondly, the assessment for monitoring the progress of children's scientific development at age 11; and thirdly, the assessment for the purpose of providing information about children's scientific development at age 11.

The advantages of observation as a method of assessment are that all kinds of attitudes, abilities and concepts relating to the whole range of goals of science activities can potentially be included. The disadvantage is that it is not easy to do unless you know what to look for and how to interpret what children do in a variety of different contexts. So it is not enough to say "go and look at what the children do". There must be guidelines for what to look for which also act as criteria as the basis of judgments for deciding where the children are in their development.

The goals of science activities provide the framework for these criteria and are most useful when expressed in terms of development in relation to each attitude, ability or concept. Such criteria were identified as part of the work of the Schools Council Project which produced the "Match and Mismatch" materials and published examples of checklists for assessing pupils in the earlier (roughly age five to nine) and later (nine to thirteen) part of development in the five to thirteen age range. For example the criteria for assessing a child's observation in the early years are:

- (1) Makes limited use of his senses, noticing only some of the things which can be observed in the situation or only those which are pointed out.
- (2) Makes all kinds of observations, using several senses, though not able to discriminate the more important from the less important observations for the inquiry in hand.
- (3) Makes wide-ranging observations and can select from them the information relevant to a particular problem or inquiry.



First year chemistry at Ilington Green School.

Photo: Joanna Blagden

findings, communication, etc); concepts and their application (ideas about living things, about forces, about common materials, etc, appropriate to the age and experience of the child); and attitudes of science (such as respect for evidence, open-mindedness, independence in thinking, responsibility towards living things).

A range such as this presents a formidable challenge to assessment for any purpose. Starting with the teacher in the classroom wanting diagnostic information to help in teaching decisions, the question is how can the information be obtained? To give the kind of detail which is required would need a veritable battery of instruments, if it were to be done by formal testing. Even supposing such tests existed—which is not the case—there would not be the time for a teacher to administer and mark them. In many cases formal testing is not necessary for this purpose, since there is no advantage in being able to compare pupils.

All that formal testing does is to provide situations in which pupils respond, showing the extent to which they have achieved certain ideas or skills demanded by these situations. In the classroom the activities in which the children are engaged must already provide situations for the assessment of scientific ideas and skills. In so far as they provide opportunities for this development to take place, teachers can then gather information about pupils by careful observation of how they carry out their work, a method already used effectively in many other areas of the curriculum.

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ments, arranged in order of progressive development:

- (1) Makes limited use of his senses, noticing only some of the things which can be observed in the situation or only those which are pointed out.
- (2) Makes all kinds of observations, using several senses, though not able to discriminate the more important from the less important observations for the inquiry in hand.
- (3) Makes wide-ranging observations and can select from them the information relevant to a particular problem or inquiry.

For "Independence in thinking" the statements, again in order of progressive development, are:

- (1) Tends to accept anything he is told by others without question. Makes decisions or forms ideas based only on what others do or say.
- (2) Very tentative about deciding things for himself in a new situation but more confident in familiar situations; rather more willing to change his ideas than to defend them if others disagree.
- (3) Makes up his mind about what to do or think after considering the available evidence or alternatives and is prepared to defend his opinions or ideas and not change them just to be in line with others.

The question may arise "what if there is no opportunity to observe these things?" One part of the answer is to take a broader view of what observation means in this context. It means far more than just watching what the children do; it means talking with them in a way which gives them freedom to express their ideas without fear of giving the wrong answer; it means asking "open", as opposed to

"closed", questions and ones which invite the children to express their own ideas; it means placing more emphasis on listening to children rather than talking to them, and struggling to understand things from their point of view. Another part of the answer is to look hard at the children's activities and to make sure that they do give chance for scientific attitudes and abilities to develop and to be observed. There is no point in introducing "set pieces" for the purposes of assessment if the normal activities do not promote the children's scientific development to do so would be letting the assessment fail to be the curriculum dog.

As mentioned earlier, assessment has other purposes than diagnosis and when the purpose is quite different it may well be that very different methods of assessment have to be used. The sharpest contrast with classroom assessment, which is close to pupils, is the assessment being carried out by the APU to survey achievement across a national sample of pupils. Scientific development is being monitored at ages 11, 13 and 15 and was carried out for the first time at age 11 in May. In this case formal testing has overwhelming advantages as a method of providing the information. What is required is to be able to show what is typical of certain groups of pupils and to do this the performance of a statistically sound sample has to be averaged.

Thus it is important for large numbers of pupils to be put in the same situations and to apply a standard scoring system to their responses. Methods of testing which can be chosen are thus dictated by these demands; the normal activities of children's normal activities cannot be used since these situations are

too variable and spread out over time. Instead there are "set pieces" presented to the children either on paper or in a practical test. Inevitably the wide range of all goals cannot be covered in this way, as it can be by observation, thus the APU tests only a sub-set of goals and not the whole range. This restriction does not necessarily reduce the value of the information obtained as long as it is kept clearly in mind when interpreting the results.

For the national survey paper and pencil tests are used where they are appropriate. For example to test ability to see patterns in data, written tests are used and children given, for example, results from a simple investigation, such as how quickly water dries up in different circumstances, and they are asked to link results to the variable conditions. To test observation, written tests are not adequate. In this case the children have been shown films or photographs or given objects to handle. These things have been taken to schools by test administrators who are teachers released from school for this work. Administrators also visit schools to give to pupils on an individual basis tests which involve tackling short investigations while the tester observes the performance and records significant aspects of it, using a checklist.

These formal methods would be too time-consuming for teachers to develop and use; they serve their particular purpose best, but they would not serve the purpose of day-to-day classroom assessment as adequately as other methods can do. The relative advantages and disadvantages of different ways of assessing vary according to purpose. So we come back to the importance of the question posed at the beginning: the reason for assessing must always be clear. Keeping this in mind will help to avoid the temptation of using "tests" because they are there, rather than when they are really needed.

Dr Wynne Harlen is Senior Research Fellow at the Centre for Science Education, Chelsea College

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extra BREAKING THE BOUNDS

John Garrod describes physics at Sevenoaks School

For five years now, the physics department at Sevenoaks School has been engaged in a programme aimed at trying to maximize the educational opportunity, in the broadest sense, presented by the subject.

The department has sought to involve as many pupils as possible, and in doing so has found that several new and rewarding links have been forged with industry and the community, as well as giving many pupils a considerable responsibility and opportunity for leadership. The programme has consisted of organizing some 25 extra activities additional to the normal academic work of the department, and these involve over 150 pupils regularly in out-of-school time.

Several of these activities link the school with industry. The most exciting is the recently established research programme in which several pupils are engaged in a number of different projects for a commercial research organization. The advantage for the firm is that work under the direction of their scientists can be carried out in areas in which they wish to develop an interest for future applications; for us, pupils are able to work in genuine research with its associated challenge.

Fruitful too are the weekly science seminars in which a scientist or engineer from industry discusses technical aspects of his work. The purpose is partly to add practical flesh to the theoretical bones taught at school, and partly to enable pupils to meet people with careers in areas which might interest them in the future. They have proved for more effective than "career talks" in arousing interest, and firms have been only too willing to send first-class speakers. This programme and invitations are organized entirely by pupils. Out of many of the seminars have come invitations to visit firms or research establishments and several visits are arranged each term.

The Amateur Radio Society operates the school transmitting station G4GUM, with four licensed amateurs. Regular contacts are



Andrew Johnson (15) with his primary scientists.



Chris Rice and handicapped astronomer building their telescope. Photo: Ian Gibson

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SCIENTIFIC BIAS

Andrew Neal writes on the BBC School TV General Studies series

"What's so special about the silicon chip?" "How can genetic engineers create life?" "What's it really like to have a baby?" "What are the dangers of nuclear power?" Questions like these are just as likely to be raised by sixth formers studying in physics or biology. They hear about current issues from the news, and want a clearer understanding of the subject so that they can form an objective opinion. In such a complicated world as ours it is not surprising that teachers sometimes find it difficult to give full and satisfactory answers to such questions.

Certainly syllabuses include more of the "applied" science than they used to. But teachers wishing to raise the important—and interesting—practical and ethical aspects of the subject find difficulty in keeping abreast of current developments in research across a broad field, or finding sufficient time to explain them in the classroom, due mainly to the pressures of the syllabus.

It seems that there is no lack of enthusiasm among teachers to introduce topics that demonstrate the relevance of science to society. This is reflected in the development of general studies courses. For many sixth formers and teachers these give an opportunity to explore interesting topics that are not on the specialist syllabuses and are free of

examination pressures. However, general studies has become a fast growing examination subject in its own right, which last year attracted some 21,000 A level applicants, and 21,000 O level applicants. To help teachers with the daunting challenge of preparing young people in the 16 to 18 age group for life as well as for passing examinations, BBC School Television provides a series of television programmes called *General Studies*. The series is relevant and stimulating material for the present, and stimulates discussion and broadens the experience of its audience. This is no small challenge in itself. With 20 programmes each year,

there is a balance between arts, social, science and technology topics. This autumn's term, topics will include nuclear power, pregnancy, abortion and genetic engineering.

Before television programmes are made on subjects such as these, many questions need to be answered: what do pupils want to know about the subject? What should pupils learn about it? How wide a range of opinion should be included? Should the issue be open ended, or is there a conclusion? How much basic science should be explained before the applications or implications can be understood? How graphic should be an explanation of, for example, an abortion operation, or the birth of a baby?

It is important to get the answers right, as far as possible, so as to provide teachers with the most useful programmes. It is immensely

valuable to producers to have reports from teachers on the way the programmes were received in the class, the constructive comments, and the suggestions for future programmes. It is very encouraging to see that the number of schools using the series *General Studies* has doubled in the last academic year.

It could be that the interest shown in *General Studies* reflects a general awareness of the importance of the world we live in, and a conscious desire to stand there. Some may regret that the issues are not explored as far in the specialist A level subjects. However, general studies courses can examine these issues, bringing a broader understanding to all A level students whatever their subject preferences.

Andrew Neal is BBC School Television.

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Number on roll: 180

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Redbridge
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Seaton Lane, Hartlepool, Cleveland
TS25 1HN

A Head Teacher is required for this well established Junior School serving the Southern area of Hartlepool. Financial assistance with household removal expenses and further details are obtainable from and returnable to the County Education Officer, Education Offices, Woodlands Road, Middlesbrough, Cleveland TS1 3GN, not later than 24th October, 1980.

Redbridge
London Borough

Primary Education
Headship
Parkhill Infants' School, Lord Avenue
Clarkhill, Hord IG5 0DB
GROUP 4
Required from January, 1981, or April, 1981, a well-qualified and suitably experienced teacher as Head of this Group 4 Infant (5-7) School.
The post will become vacant through the retirement of Mrs. K. E. Wilson.
Salary in the range of £8,839-£9,852 and Outer London Allowance (£489).
For further details and application form please apply to J. E. Fordham, S.A. Chief Education Officer, Education Offices, Lynton House, 255-259 High Road, Hord, Essex IG1 1BA (Telephone 01478 3022, ext. 192/193).
Closing date: 17th October, 1980.

Redbridge
London Borough

PRIMARY
Headships continued

KENT
COUNTY COUNCIL
EDUCATION DEPARTMENT
SEVENOAKS DIVISION

HEAD TEACHER required at each of the following Schools for January, 1981, if possible, which will be on a full-time basis. The school is a well designed modern building situated in a rapidly developing housing area in London, E16.
Those who have already applied for this post will automatically be reconsidered.
London Allowance: £750 plus Social Priority Allowance £201-£276.
Application forms/further particulars available from the undersigned, The Clerk to the Governors, J. H. Pelling, to whom completed forms should be returned by 17th October, 1980.
Director of Education, Education Offices, Broadway, Stratford, London, E15 4BH.

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Form and Mary Colleges

Masters/
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DEPUTY HEAD
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(S.A.C. place)
service. Marcus

The Director, Kidnsworth Grammar School, Kidnsworth, Chalfont, Bucks.

**Deputy Headships
Senior Masters/
Mistresses**

**AVON COUNTY
KIDNSWORTH SCHOOL**
A public day school, Kidnsworth
Avonmouth, Bristol.
A mixed all-age range, E.S.N. &
A in a pleasant area.
Bristol.

1. DUTY: HEADSHIP (Group A)
Application by letter to the R.
Immediately with curriculum
and names of two referees. Full
details on request. (Tel) 01454
Avonmouth 823582.

1981, for this Group 6(s) all
Informal visits are welcomed.
Application forms are available
from the Director of Educational
Care, Mercury Gardens, Rom-
ford, Essex. There is a scheme
for removal expenses—details
on request. Closing date: 14
days after the appearance of
this advertisement.

HERTFORDSHIRE
COUNTY COUNCIL
EAST HERTS DIVISION
ANWELL VIEW SCHOOL E.S.N.
4th GROUP
DEPUTY HEAD Mr. W. Wara. Herts.
Age 39. Single. Age 4-15
Required for January 1981
DEPUTY HEAD (Group HS).
Candidates who wish to visit the
school, contact telephone Wares
3474.
Application forms and further
information available from
Divisional Office, Scott House,
Hugaball Road, North Herts.
Closing date 13th October, 1980

John. Adventurous.
 Salary: Burnham scale 3 b
 Special Allowance of \$204
 Further details and application forms available from (and returnable to) the Personnel Office, 100 Strand Square, Carlisle, Cumbria. Deadline October 17, 1980.

PRESTON
HOVAL COLLEGE SCHOOL
TEACHING DEAF AND PARTIALLY HEARING
LEARNING
 Required for January
 6 pupils and 6 teachers
 of DEPARTMENT of
 special unit for audiology
 and speech therapy
 Road 186 post is available
 for information and application

UNDIRIA
STUDENT COUNCIL
OF SCHOOL
article
130 F.S.N. (4), seven to 14
of the school, plus small in-
ment will, three to seven
years.
Requested for January 1961: an
ASSISTANT TEACHER (Male 1961)
undertake general teaching
duties and be in charge of the
organization of the school
to organize Community Service and
Career Preparation projects with
the school and to undertake
pastoral care responsibilities for all
boys throughout the school.
The candidate must have had sub-
stantial experience of working with
low-achieving pupils at secondary
level with the school staff and
or be a member of the school or
of a religious group in secondary

HUMBERS:
HUMBERS DIVISION COMMITTEE
PASTRY DIVISION UNIT
OLD CLEM HIGHER SCHOOL
10000 UNIVERSITY DRIVE
Applications are invited from suit-
ably qualified, and experienced
housewives to act as
LEARNERS IN CHARGE of this hear-
ing-impaired unit for children from
4 to 12 years of age, U.S.A.
Application forms and further in-
formation, obtainable from the Head
of Section, may be obtained from the
National Deaf Children's Association, 10
Catharine Street, London, W.C.2
Adult numbers are invited to
attend the hearing-impaired unit

Further details and application to
Bordham, Chief Education Officer
45-259 High Road, Ilford, Essex
01-478 3020 ext. 194, completed
returned to the Chief Education
1980.

Redbrick

London

SPECIAL S
Accident Hospital School

Church.
For application forms and further
large S.A.E. to: Mr. K. M. W.
Centre for Physically Handicapped
Hill Road, W.
N21. Telephone



Church
Child

Available from J. E.
Education Department,
111N (Telephone
Applications should be
received by 24th October,

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Borough

OLS
with Raw B15 1NA

details please send
Principal, Halliwick
Young People, Bush
more Hill, London;
01-386-2442

LONDON BOROUGH OF ENFIELD EDMONTON COLLEGE OF FURTHER EDUCATION Mortagu Road, Edmonton N18 2LY HEAD OF DEPARTMENT OF COMMUNITY CARE

Applications are invited for January, 1981, from persons with relevant graduate and professional qualifications, successful teaching careers, appropriate work experience and proven managerial skills, to take charge of a newly formed Department of Community Care Studies.

Applicants should be able to motivate and lead a team of specialists in extending and developing established areas of work including NURSERY NURSES; RESIDENTIAL AND DAY CARE; HOME HELPS; FOUNDATION COMMUNITY STUDIES; PLAYGROUP LEADERS; WORK INTRODUCTION AND WORK PREPARATION FOR SCHOOL LEAVERS.

Salary Scale: Head of Department, Grade 11, £10,542-£11,835.

Consideration may be given to assistance with removal and relocation costs and provision of temporary accommodation.

Application forms and further details may be obtained on receipt of a large 3 A.E. and should be returned to the DIRECTOR OF EDUCATION, Enfield College, Mortagu Road, Edmonton N18 2LY, within 14 days of the appearance of this advertisement.

STOCKTON-BILLINGHAM TECHNICAL COLLEGE

The Causeway, Billingham, Cleveland

80/12 LECTURER GRADE 11 IN MECHANICAL/MAINTENANCE ENGINEERING

This post is for a well qualified and experienced FE teacher who will be responsible for the Head of Engineering for the efficient operation of certain workshops and the further development of Craft and Technician courses in the Mechanical/Maintenance field. Applicants should have teaching training and experience in addition to good relevant technical qualifications and industrial experience.

80/13 LECTURER GRADE 1 IN ELECTRONICS/ELECTRICAL ENGINEERING

A lecturer is required to teach in the field of Electronics, including Computer Applications, and Electrical Work on TEC, Craft Studies, and Electrical Installation courses. Applicants should have at least HNC (Electrical) qualifications and appropriate industrial experience. Teacher training and/or some successful teaching experience is highly desirable.

Salary in accordance with Burnham FE Teachers scales: £11-£8,012-£9,702

Further details of these posts and application form can be obtained from The Principal at the College, to whom completed forms should be returned within 14 days of the appearance of this advertisement.

LEIGH COLLEGE LECTURER II CONTROL/ INSTRUMENTATION

Salary: Lecturer II Scale £8,012-£9,702

Required to teach control/instrumentation theory and practice on TEC and HNC courses in Electronics and Production Engineering. There will also be considerable involvement in the further development of the new instrumentation/control laboratory. The person concerned will be expected to maintain and develop links with local industry by means of short courses. Experience of microprocessors applications in this area would be an important advantage.

Candidates should have relevant industrial experience and possess an Engineering degree and/or membership of an appropriate Professional Institution.

LECTURER I MECHANICAL/ PRODUCTION ENGINEERING

Salary: Lecturer I Scale £4,883-£6,055.

Required to teach at TEC Certificate and Higher Certificate Level.

The successful candidate will be required to teach Materials as his specialism and to assist in general in Mechanical/Production subjects, including project work.

Applicants should have relevant industrial experience and graduate status.

Further particulars and application forms available from The Principal, Leigh College, Mortagu Road, Wigan, W17 4AH, to whom they should be returned within 14 days of the appearance of this advertisement. (A40)

INDEPENDENT continued

Technical Studies

Heads of Department

LONDON

HANWORTH SCHOOL, Wokingham (Hants) (1981). Head of Department of Technical Studies. Salary: £11,835-£13,125.

WIMBORNE SCHOOL, Wimborne (Dorset) (1981). Head of Department of Technical Studies. Salary: £11,835-£13,125.

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Other than by Subject Classification

HAMPSHIRE

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Deputy Headships Senior Masters/ Mistresses

SHEFFIELD

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STAFFORDSHIRE EDMONTON COLLEGE OF FURTHER EDUCATION Mortagu Road, Edmonton N18 2LY HEAD OF DEPARTMENT OF COMMUNITY CARE

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Salary Scale: Head of Department, Grade 11, £10,542-£11,835.

Consideration may be given to assistance with removal and relocation costs and provision of temporary accommodation.

Application forms and further details may be obtained on receipt of a large 3 A.E. and should be returned to the DIRECTOR OF EDUCATION, Enfield College, Mortagu Road, Edmonton N18 2LY, within 14 days of the appearance of this advertisement.

STOCKTON-BILLINGHAM TECHNICAL COLLEGE

The Causeway, Billingham, Cleveland

80/12 LECTURER GRADE 11 IN MECHANICAL/MAINTENANCE ENGINEERING

This post is for a well qualified and experienced FE teacher who will be responsible for the Head of Engineering for the efficient operation of certain workshops and the further development of Craft and Technician courses in the Mechanical/Maintenance field. Applicants should have teaching training and experience in addition to good relevant technical qualifications and industrial experience.

80/13 LECTURER GRADE 1 IN ELECTRONICS/ELECTRICAL ENGINEERING

A lecturer is required to teach in the field of Electronics, including Computer Applications, and Electrical Work on TEC, Craft Studies, and Electrical Installation courses. Applicants should have at least HNC (Electrical) qualifications and appropriate industrial experience. Teacher training and/or some successful teaching experience is highly desirable.

Salary in accordance with Burnham FE Teachers scales: £11-£8,012-£9,702

Further details of these posts and application form can be obtained from The Principal at the College, to whom completed forms should be returned within 14 days of the appearance of this advertisement.

LEIGH COLLEGE LECTURER II CONTROL/ INSTRUMENTATION

Salary: Lecturer II Scale £8,012-£9,702

METROPOLITAN BOROUGH OF Rochdale

EDUCATION DEPARTMENT

CAREERS OFFICER

AP 3/4 24,581/25,784

Applicants for the above post must hold or be about to obtain the Diploma in Careers Guidance (or equivalent). Students completing full-time Careers Service Training Courses at Christmas are eligible for consideration.

The successful candidate will provide a careers guidance job placement and follow-up service to young people leaving schools and colleges in the Borough. An essential user car allowance is payable. Assistance with removal and other expenses and housing accommodation may be available in appropriate cases.

Application forms and further details are available (by quoting reference number E133) from the Chief Personnel Officer, PO Box 68, Municipal Offices, Smith Street, Rochdale, OL16 1XQ (telephone Rochdale 47474, Ext. 882) to whom they should be returned by Friday, 17th October, 1980.

HM INSPECTORS OF SCHOOLS

Secondary Education

Applications are invited from men and women, preferably aged between 35 and 45, for appointment as HM Inspectors of Schools in England. HMIs provide a service of professional advice at the Department of Education and normally carry out a general as well as a specialist assignment. Their work primarily involves inspecting and advising educational institutions, but also includes consulting with local education authorities and contributing to in-service training.

Vacancies exist for inspectors specializing in one of the following areas: business studies and economics; English, drama, geography, health education, modern languages (particularly French); religious education, and those who, whatever their specialist subject, have had experience appropriate to the secondary school curriculum of micro-electronics and electronics systems applications.

Applicants should have appropriate qualifications and substantial teaching experience in the subject they offer, normally in secondary schools or institutions of higher education and should have a lively interest in education and some knowledge of the varieties of current educational practice. Applications would also be welcomed from candidates who have in addition good recent experience of the education and training of teachers. Starting salary, within the range £12,325-£17,506 (higher in London). Higher posts are filled by promotion.

Application forms to be returned by 7th November, 1980 and further information may be obtained from Miss J. D. Church, Room 10/2, Department of Education and Science, Elizabeth House, 30 York Road, London SE1 7PH, telephone 01-928 8222 extension 2237 or 2786. Please quote 50/80E.

DEPARTMENT OF EDUCATION AND SCIENCE

Resources Adviser

London

The Health Education Council is responsible for developing and promoting health education activities in England, Wales and Northern Ireland. One of its fastest growing services is its Resources Centre within which the post of Resources Adviser has been established. The main responsibility will be for reviewing health education teaching resources of all kinds, both for availability and quality, and for advising teachers and other professionals about them. Participation in the work of the Resources Centre as a whole will also be involved.

Applicants should be qualified teachers, able to demonstrate a lively interest in the use and assessment of resources. Naturally sound knowledge and experience of teaching health education would be a considerable advantage. Starting salary for this important and challenging post will be c.£5,800 (currently under review) and the post is superannuable. Benefits include good holidays and canteen facilities.

Please write or telephone for further information and an application form to:

Mr. T. J. Cartwright, Office/Personnel Manager, Health Education Council, 78 New Oxford Street, London WC1A 1AH. Telephone: 01-637 1981, ext. 207. Closing date for applications 13th October, 1980.



The Health Education Council
Helping you to better health

ADMINISTRATION

General

continues

THE LONDON CHAMBER OF COMMERCE AND INDUSTRY

COMMERCIAL EDUCATION

Applications are invited for the post of Assistant Secretary to the Group Secretary, Commercial Education, to be based in the London Chamber of Commerce and Industry.

The person appointed should be able to offer administrative and clerical skills, and have experience of the commercial sector. The successful candidate will be responsible for the day-to-day running of the Commercial Education Department, and will be required to work closely with the Group Secretary and the various committees of the Chamber.

For further details and application form, please apply to the Group Secretary, Commercial Education, London Chamber of Commerce and Industry, 100 Abchurch Lane, London EC4N 3DF.

Examiners

JOINT MATRICULATION BOARD

UNIVERSITIES OF MANCHESTER, LIVERPOOL, SHEFFIELD AND BIRMINGHAM

EXAMINERS FOR THE O.C.E.

For the 1981 series of examinations, the Joint Matriculation Board is seeking experienced teachers to examine in the following subjects:

General Paper, English Literature, English Language, Mathematics, Science, History, Geography, Modern Languages, and Physical Education.

For further information, please apply to the Secretary, Joint Matriculation Board, 100 Abchurch Lane, London EC4N 3DF.

For the 1981 series of examinations, the Joint Matriculation Board is seeking experienced teachers to examine in the following subjects:

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English as a Foreign Language

LARNET